



EDINBURGH TRAM INQUIRY

Selected Ex Tie Employees (SETE)

Group Closing Submissions



(Revised) Beltrami & Co 10.05.18

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Key to references used in this document:

EXAMPLE 1

John Smith transcript 123.12-124.2 (Monday 1 January)

- Found in transcript of oral evidence of witness named at passage from page 123, line 12 to page 124, line 2
- Date provided only where witness provided evidence over more than one day

EXAMPLE 2

ABC00000123_0001 para 1 or c1 or Q1

- Inquiry document: Haymarket reference number, followed by four digit page number where appropriate
- Paragraph number included where document is a report or statement which contains said numbering
- Clause number included where the document is a contract or other agreement
- Question number included where the document is a witness statement in question and answer format

INTRODUCTION

The Selected Ex Tie Employees (SETE) group of Core Participants comprises the following people:

- **Steven Bell**, Chartered Civil Engineer. Former Managing Director of Track Group within First Engineering. Now Engineering Director with Amey Rail Limited.
 - TIE Engineering & Procurement Director Sep 2006-Dec 2007
 - **Tram Project Director Jan 2008-Oct 2011**

- **Susan Clark**, held various roles in British Rail, Railtrack and Network Rail before joining TIE as Project Director for the EARL project.
 - **Tram Programme Director/Deputy Project Director Aug 2006-Oct 2011**

- **Mark Hamill**, Head of Risk Management for two entities prior to joining TIE. Latterly Vice President Risk Management at ADAC and now Project Director with Turner & Townsend.
 - **TIE Risk Manager May 2007-Dec 2010**

- **Tom Hickman**, former Zone Planning Engineer with First Engineering and Central Planner with BP Grangemouth. Senior Project Control Engineer with Turner & Townsend before joining TIE.
 - **TIE Programme Manager May 2007-Oct 2011**

- **Richard Jeffrey**, Chartered Civil Engineer, former Managing Director of Edinburgh Airport Limited and former President of Edinburgh Chamber of Commerce.
 - **TIE Chief Executive Apr 2009-Jun 2011**

- **David Mackay**, former Chief Executive of John Menzies plc and former Chairman of Scottish Rugby.
 - **TIE Chairman Nov 2008-Nov 2010**
 - **TEL Chairman Feb 2006-Nov 2010**

- Core Participant status was also granted to **Frank McFadden**, but as his written evidence has not been produced and no oral evidence has been required of him, it is not proposed to make any submissions on his behalf.

The submissions contained in this document extend only to the involvement of these individuals in the Edinburgh Tram Project. None of these submissions is intended to cover the acts or omissions of TIE as an organisation or as a limited company. However, standing that the named individuals formed a significant section of TIE's management at certain periods of the project, reference is made at various sections to actions taken, positions adopted, strategies pursued or efforts made by TIE as an organisation, insofar as these may reflect upon said individuals.

These submissions are intended to be read as supplementary to the oral and written evidence to the Inquiry which has been given by each member of the group:

- **Bell** - written evidence TRI00000109, TRI00000257, TRI00000267, oral evidence Tuesday 24 October, Wednesday 25 October
- **Clark** – written evidence TRI00000112, TRI00000258, oral evidence Wednesday 25 October
- **Hamill** – written evidence TRI00000042, oral evidence Thursday 19 October
- **Hickman** – written evidence TRI00000147, TRI00000255, oral evidence Wednesday 25 October
- **Jeffrey** – written evidence TRI00000097, TRI00000172, oral evidence Wednesday 8 November, Thursday 9 November
- **Mackay** – written evidence TRI000000113, TRI000000158, TRI00000173, oral evidence Tuesday 21 November

Likewise these submissions do not specifically reiterate matters which are already detailed in the Inquiry Statement of Main Documents and Events (TRI00000127).

There are approximately 17,000 Inquiry documents available to representatives of the Core Participants on the Haymarket electronic database. Each member of the group was personally provided with a smaller subset of these documents on a steelnet account when preparing their witness statements. When they came to provide their oral evidence, members of the SETE group were at times directed to various documents of which they had not been given prior notice via steelnet. Their answers should accordingly be considered in light of that factor, particularly where the whole of a document provides context to the selected passages which were put in evidence.

These submissions are only able to comment on documentary material which has been made available via Haymarket. It is noted that the volume of material originating from TIE and CEC on that database significantly outweighs the material from any of the contractors.

(1) GOVERNANCE AND REPORTING LINES

1A – Governance structure

The formal governance for the tram project appears to have been at least complex, and arguably confused in some respects. However in the view of **David Mackay** as Chairman of the TIE, TEL and Tram Project Boards, it nevertheless worked in practice, with the TPB as the “workhorse” of the project where all the major stakeholders came together ¹. This sentiment was echoed by a number of others including Graeme Bissett², **Richard Jeffrey** ³, Tom Aitchison ⁴, Kenneth Hogg ⁵ and Neil Renilson ⁶. An audit of governance by Deloitte in February 2009 noted that:

*“The governance arrangements which were developed as part of the business case for the Edinburgh Tram Project appear to have been operating effectively. No control weaknesses were noted in relation to the current governance structure.”*⁷

The “churn” in senior personnel at TIE cannot have been advantageous to the project. Mackay as Chairman, Jeffrey as Chief Executive and **Steven Bell** as Project Director each inherited responsibility from predecessors who departed for a variety of reasons,

¹ David Mackay transcript 3.15-4.11

² Graeme Bissett transcript 90.18-91.9 (Tuesday 31 October)

³ Richard Jeffrey transcript 5.4-8.17 (Wednesday 8 November)

⁴ Tom Aitchison transcript 9.6-9.8

⁵ Kenneth Hogg transcript 90.2-90.18

⁶ Neil Renilson transcript 24.19-24.25 (Thursday 14 December)

⁷ CEC00111617_0004

few of which seem to have been positive ⁸. In each case, the inherited responsibilities also carried with them a number of inherited problems – problems which were “baked in” to the project ⁹.

The Council’s reliance on TIE to deliver the tram project depended in large part upon the advice provided to TIE by their solicitors DLA ¹⁰. To that extent, the fact that DLA were apparently “stood down” in 2007 during the Infraco procurement process has been highlighted as a matter of concern. The decision to stand down DLA appears to have been made by the then Executive Chairman of TIE Willie Gallagher, unbeknown even to Matthew Crosse, who was then the Project Director ¹¹. Mackay was likewise unaware at the time that this had occurred ¹², as it was never reported to the Board (see the various TPB minutes throughout the period which are silent on the issue). The decision to stand DLA down was later highlighted - and criticised - in a “Lessons learned” paper prepared by Bissett and into which Mackay had input in June 2008 ¹³.

There has been some scrutiny of the formation of the approvals committee (comprising Gallagher, Renilson and Mackay ¹⁴) to sign off the Infraco contract on behalf of TIE, TEL and the TPB. It appears from the evidence of each that whilst this committee met formally on 13 May 2008 ¹⁵, its approval was based on detailed papers and representations from individuals in TIE regarding the particular issues. These

⁸ See also TRI00000113_0043 para 153

⁹ CEC00376412_0003, TRI00000097_0004 para 8

¹⁰ Gill Lindsay transcript 27.15-28.3, 191.20-192.16, 194.19-195.4; Tom Aitchison transcript 37.15-37.19, 76.9-76.13, 81.6-81.9

¹¹ Matthew Crosse transcript 17.5-17.22

¹² TRI00000113_0006 para 13

¹³ CEC01344688_0012, TRI00000113_0004 para 9 & para 13

¹⁴ CEC01515189

¹⁵ CEC01289240

representations had been made in the days and weeks running up to the date of approval, the individuals being in frequent contact during this period ¹⁶. By the time that this committee was asked to give its approval, the contract had already been subject to approval earlier in the same day by the Council's Policy and Strategy Committee ¹⁷ and endorsed by the Council Executive ¹⁸.

¹⁶ David Mackay transcript 51.7-51.14, 53.9-54.2, 60.3-61.18; William Gallagher transcript 137.17-138.1

¹⁷ CEC01222172, David Mackay transcript 54.15-54.23

¹⁸ CEC01222438

1B – TIE reports to CEC

Several Councillors expressed frustration about the level of information coming from TIE¹⁹. Generally however, these Councillors considered that they had sufficient information to make their decision to proceed with the project²⁰. There was a recognition in CEC²¹ and even amongst Councillors of a chronic problem with leaks of confidential information²², which was blamed on the “anti-tram elements”²³.

In any event, TIE’s principal reporting line was to the CEC officers (and TEL). In turn, the CEC officers had responsibility to report to the elected members²⁴. It is therefore significant that TIE provided CEC officers with considerably more information than those officers passed on to Councillors. Whilst TIE was often given the opportunity to comment on Council reports, it had no editorial control, and the content was entirely a matter for the CEC officers²⁵. The leader of the Council was concerned on discovering, via the Inquiry, that Council officers had rather more frank and detailed information about, for instance, the risks inherent in the incomplete design than was apparent in the Final Business Case²⁶. A confidential briefing note circulated to CEC Directors in December 2007²⁷ set out the information which CEC officers had at that time

¹⁹ eg Lesley Hinds transcript 6.3-6.11 (Wednesday 6 September), Ewan Aitken transcript 122.11-122.14. Specific criticisms of TIE’s reporting in relation to the later disputes is covered in Section 8D below

²⁰ Jennifer Dawe transcript 72.17-72.24, Lesley Hinds transcript 22.6-23.13 (Wednesday 6 September)

²¹ Nick Smith transcript 59.22-60.3 (Thursday 14 September)

²² Jeremy Balfour transcript 138.3-138.14, Lesley Hinds transcript 73.19-73.20 (Wednesday 6 September)

²³ Jennifer Dawe transcript 53.12-53.15

²⁴ TRI00000097_0006 para 14

²⁵ TRI00000097_0007 para 19

²⁶ Jennifer Dawe transcript 166.8-166.15

²⁷ CEC01397539, CEC01398245_0091

concerning virtually all of the issues which were to continue to bedevil the project.

Significant sections of that note set out the following:

“3.2 It is currently unclear to CEC as to the scope of the works, the timescale of the project, and the allowance for incomplete detailed design and implication for gaining approved designs (technical and prior approvals). All the above can have potential impacts of time and costs and under this form of contract potential major cost implications because of delay and disruption to the position at financial close.

3.3 This form of contract was adopted "fixed price" on the basis of complete approved designs however as this is not where we are this current position requires to be reflected in the QRA and contingency allowance.

3.4 The underlying concern is that while it may be achievable to reach a financial close of £498m, this will result in a major challenge in managing this during the contract. It has been confirmed by tie that the extension of time from the current target would have a significant impact on overhead costs on this form of contract.

3.5 There is also a physical limit to accelerating the works because of the constraints of maintaining traffic movement in the city centre, hence lost time to extension of time may not be compressed...

6.2 There have been problems with Utilities adhering to the MUDFA programme and misadvising of where utility pipes/cables are active...

7.1 *BBS are presently unhappy with accepting the novation of the SDS contract as effectively SDS are not bound to process the designs within specific timescales, whereas BBS are timebound in terms of project delivery.*

7.2 *They will carry the financial risk of delay if SDS fail to deliver approved drawings on time. They have therefore asked tie whether there are any approvals which the Council would be willing to take back the risk on.*

7.3 *The Council has always sought tie to procure a fixed price contract. Inevitably, the absolute fixing of the price by BBS would require finalised approved drawings. For whatever reason, tie and SDS have failed to obtain approvals for the drawings to date.*

7.4 *Accordingly, the present price must be based on unapproved drawings. If the Council accepts the risk re the approvals rather than BBS this will likely lead to (i) inappropriate pressure being put onto planning colleagues to approve drawings simply to stop an delay and added expense to the project; and (ii) the Council being left to foot the bill for any consequent delays...*

7.10 *The fact that the design is incomplete will increase the risk of variation orders, delay to MUDFA and subsequent delay to Infracore and have a knock on effect to the TRO process.*

14.1 *tie project managers are worried by the lack of progress on key aspects of the contract, which suggests the Council should be also."*

When Infracore came with a last minute price increase on 30 April 2008, CEC Legal were well aware of the position (albeit that it was not communicated to Councillors), and Colin Mackenzie posed the question: "Are members being properly served by officers?"²⁸. Mackenzie similarly had expressed the view in March 2008 that the Chief Executive of the Council should report to Councillors on the material changes since the FBC²⁹.

The former Provost was "shocked" to discover that CEC officers were aware of the problems with the project "long before we were"³⁰. Later in January 2010, Nick Smith of CEC Legal sent a briefing email to the incoming Alistair Maclean saying:

*"be very careful what info you impart to the politicians as the Directors and tie have kept them on a restricted info flow. Given current sensitivities it is critical that this remain in place"*³¹.

To the extent that this comment is critical of TIE, it evinces a misunderstanding of TIE's role in the structure which, as noted above, was to report to CEC officers rather than to elected members.

There were also however claims from some CEC officers that TIE were not always forthcoming with information. The Director of Corporate Services noted that part of TIE's frustration was that CEC had to take account of the public's views, whereas TIE had a more businesslike approach³². Maclean claimed to have experienced resistance and/or

²⁸ CEC01241689

²⁹ CEC01399016, see also CEC01256710

³⁰ Lesley Hinds transcript 23.8-23.14 (Wednesday 6 September)

³¹ CEC00473789

³² Jim Inch transcript 108.20-109.1

dilatoriness from TIE when he sought a copy of the Infraco contract³³, though he was forced to concede that in fact CEC already possessed a copy³⁴. In turn however, the CEC Executive and CEC Legal resisted providing a copy of the contract to Councillors³⁵.

The outgoing Director of City Development did not have concerns about TIE reporting³⁶. The outgoing Council Solicitor likewise did not agree with her staff that there was a lack of transparency from TIE³⁷ and, on the contrary, felt that CEC officers were reluctant to share information that would have assisted TIE in driving the timetable forward³⁸.

Whilst supportive of his colleague Nick Smith, whose enquiries had been described by **Richard Jeffrey** as “unhelpful and symptomatic of the CEC input lacking focus”³⁹, Maclean conceded that he understood that TIE wished for there to be a single conduit for information requests by CEC, and that it did not make sense for CEC Legal to ask legal questions of TIE which could have been asked directly of DLA⁴⁰. DLA were instructed by Jeffrey to provide CEC with any information it wished to have⁴¹.

Nick Smith noted that as Chief Executive Jeffrey was “much more open with CEC” than his predecessor Willie Gallagher⁴². The Director of City Development echoed this

³³ Alastair Maclean transcript 39.12-39.25

³⁴ Alastair Maclean transcript 40.2-40.13. There is some doubt however over who in CEC actually read it – see Section 7C below

³⁵ CEC00037338, Alistair Maclean transcript 74.4-74.10

³⁶ Andrew Holmes transcript 110.24-111.9 (Wednesday 29 November)

³⁷ Gill Lindsay transcript 76.13-77.16, 78.9-79.14, 81.20-81.23

³⁸ Gill Lindsay transcript 79.3-79.7

³⁹ CEC00098050

⁴⁰ Alastair Maclean transcript 206.11-206.23

⁴¹ Andrew Fitchie transcript 35.12-35.19, CEC00097692

⁴² CEC00482550

sentiment ⁴³, as did the Tram Monitoring Officer (TMO)⁴⁴, who further noted that reporting on financial matters had improved when **David Mackay** as interim Executive Chairman got together with the CEC Chief Executive Tom Aitchison to effect better communication ⁴⁵, and that **Steven Bell** as Project Director was always able and willing to provide additional information if it was asked for ⁴⁶.

The TMO further confirmed that his periodic updates to the Council's Internal Planning Group (IPG) stemmed from information provided mainly from Bell (and/or Jeffrey and Mackay) ⁴⁷. These reports (which were FOISA exempt) show that information passed from TIE to the CEC officers that was not explicit in the TPB reports, which had a wider circulation and were susceptible to leaks ⁴⁸. For instance, as early as February 2009, the IPG report noted that:

"TIE has been involved over recent days in negotiating with BSC over some very significant claims. The financial impact of these claims could be substantial and, if a formal contract resolution process is required to deal with them, further programme delay is likely" ⁴⁹.

⁴³ "I found [Richard Jeffrey's] approach to be refreshingly open and direct" (TRI00000108_0057 Q68(d)); "I felt we started to get a much more forthright and realistic view of the status of the project." (TRI00000108_0059 Q70)

⁴⁴ Marshall Poulton transcript 123.15-123.24

⁴⁵ Marshall Poulton transcript 59.8-59.13, TRI00000022_0058 para 170. Aitchison noted that Mackay "was always firmly of the view that TIE and the Council should try and work closely together" (TRI00000022_0058 para 170).

⁴⁶ Marshall Poulton transcript 79.23-80.2, 81.9-82.2

⁴⁷ Marshall Poulton transcript 80.21-80.24, 120.3-120.13, 122.20-123.8

⁴⁸ See e.g. TRI00000113_0057 para 206

⁴⁹ CEC00867662_0010

March 2009's IPG report, following the dispute in Princes Street, provided a full summary of the strategic options being considered by TIE (with cost forecasts) including:

- termination: *"this option presents very significant uncertainties"*;
- settlement: *"likely to be a very (likely prohibitively) expensive option indeed"*;
- replacing Bilfinger;
- pursuing disputes through DRP: *"DRP can only be a short term solution"*;
- truncation of the route; and
- project cancellation ⁵⁰.

Subsequent IPG reports from 2009 through 2010 relayed information from TIE not only on costs but also on more detailed exploration of truncation options ⁵¹, negotiation of a potential On Street Supplementary Agreement (OSSA) ⁵² and on the strategic options under Project Pitchfork ⁵³ and latterly Project Notice and Project Carlisle ⁵⁴. These, together with the DRP updates in the IPG reports, are considered further in Section 8 below.

⁵⁰ CEC00892626_0004

⁵¹ CEC00677450_0004

⁵² CEC00469787_0003, CEC00450032_0003

⁵³ TIE00896564_0003, CEC00462004_003, CEC00236405_0003, CEC00236872_0003

⁵⁴ CEC00271534_0003, CEC00224208_0003, CEC00242752_0003

1C – Involvement of Transport Scotland

“It is unhelpful to have a project of this nature where the Government’s main transport agency is disengaged.” – Richard Jeffrey ⁵⁵

With the exception of those who actually made or implemented the decision, there was broad consensus amongst the witnesses who gave evidence that the withdrawal of Transport Scotland (TS) in 2007 had a negative impact on the tram project. **David Mackay** was one of the voices on the TPB at the time strongly arguing in favour of Transport Scotland’s continued involvement ⁵⁶.

This “hands off” approach was not followed in practice once disputes arose. Deputy First Minister John Swinney accepted that in March 2009 he instructed Mackay to get the Princes Street dispute “sorted” ⁵⁷, and subsequently the minister had regular discussions with Mackay and **Richard Jeffrey** in 2010 ⁵⁸, before ultimately meeting with representatives of the consortium and thereafter instructing the Council to go to mediation ⁵⁹.

As a separate issue, John Ramsay from TS criticised the reports coming from TIE, but his sentiments do not appear to have been shared by his superiors (Ainslie McLaughlin, Bill Reeve, Malcolm Reed), all of whom themselves had direct contact with their counterparts in TIE. Despite Transport Scotland’s official withdrawal, these senior

⁵⁵ TRI00000097_0008 para 28

⁵⁶ TRS00004547_0002. See also TRI00000113_0042 para 150. Mackay also recruited Damian Sharp, who had been involved with the project on the TS side, to work for TIE in order to avoid losing his experience: TRI00000113_0043 para 151.

⁵⁷ John Swinney transcript 110.20-111.11; David Mackay transcript 95.23-96.10

⁵⁸ John Swinney transcript 127.3-127.11

⁵⁹ John Swinney transcript 135.23-136.1; see Section 10A below

executives continued to meet with Mackay and Jeffrey and to be updated on the issues with the project ⁶⁰.

Ramsay conceded that TS got a more open working relationship with TIE when the relationship with the consortium deteriorated ⁶¹. Whilst he initially suggested this improved relationship had only started to happen in 2010 ⁶², he cited emails from as early as March 2009 as examples of this ⁶³. From TIE's perspective, the involvement of more senior members of TS such as Reeve and McLaughlin provided more active support than Ramsay's approach of criticising from the sidelines ⁶⁴.

In any event, Ramsay conceded that TS did receive information above and beyond the formal four-weekly reports, particularly at Quarterly Review meetings in which they were provided with the 'actuality' on costs ⁶⁵. This is particularly illustrated by looking at two documents considered in evidence, the first being the formal report issued to TS in November 2009. There it is stated ⁶⁶:

"We continue in this report to reflect an outturn estimate of £527.1m. However, given the commercial uncertainties with BSC and continuing delays to the project it is now considered unlikely that the full scope of Phase 1a will be completed within the available funding envelope of £545m. Until the key issues are resolved

⁶⁰ Ainslie McLaughlin transcript 160.10-160.18 (Tuesday 26 September), Richard Jeffrey transcript 12.20-13.8 (Wednesday 8 November), TRI00000097_0008 para 26-27, David Mackay transcript 80.14-81.13

⁶¹ John Ramsay transcript 14.12-14.18 (Thursday 28 September)

⁶² John Ramsay transcript 14.19-15.10 (Thursday 28 September)

⁶³ John Ramsay transcript 16.15-17.9, TRS00016963

⁶⁴ Richard Jeffrey transcript 13.20-14.25 (Wednesday 8 November), David Mackay transcript 146.5-146.15

⁶⁵ John Ramsay transcript 96.2-96.13 (Thursday 28 September)

⁶⁶ CEC00681325_0007

through the contractual and legal process, it will not be possible to forecast accurately a revised budget outturn.”

Ramsay’s complaint was that the outturn estimate above (and the accompanying text) had remained unchanged for some months. However, in the same month Jeffrey, **Steven Bell** and Stewart McGarrity also attended a Quarterly Review between TS and CEC. At that meeting the TIE representatives indicated privately that an outturn cost of £600m-£620m was by that stage more “realistic” ⁶⁷.

According to Ramsay, CEC officers tended to agree with TIE that until they had a handle on things to produce a new, realistic AFC, they would not reveal increasing costs to Councillors (though CEC officers and TS remained aware) ⁶⁸. At the previous Quarterly Review in June 2009, the CEC officers present had been:

“firmly of the view that quoting another AFC figure at this juncture isn’t going to be helpful” ⁶⁹.

Ramsay conceded that the issue was not that Transport Scotland were not being given cost forecasts but that these forecasts were not being made “officially” ⁷⁰. The reason for this, however, is perhaps obvious in light of previous discussion about leaks and confidentiality; it would have been injurious to TIE and CEC (and the public purse) if an

⁶⁷ TRS00005121_0003: Unlike the TPB Papers or TS four weekly reports, the minutes of this meeting were marked as FOISA exempt

⁶⁸ John Ramsay transcript 218.17-219.20 (Wednesday 27 September)

⁶⁹ TRS00005116_0002

⁷⁰ John Ramsay transcript 51.11-51.16 (Thursday 28 September)

increased cost forecast - taking account of the contractual disputes – had been leaked into the public domain for the contractor to exploit ⁷¹.

There were also contemporaneous concerns within TIE that Ramsay's criticisms were disingenuous - when he complained in May 2010 that:

“there are parts of the report that barely change from month to month regardless of developments” ⁷²

McGarrity sent a note to Jeffrey (copied to Alan Coyle of CEC) in the following terms ⁷³:

“You have been giving the Minister / B. Reeve regular briefings on where we are and the uncertainties we face. They have had the Pitchfork Report and the briefing on it. Steve and I have been through to Glasgow and have taken Jerry Morrissey and Ramsay through the cost estimates for the Pitchfork Option 3 in great detail. The attached note is written as if none of that has taken place and maybe a marker needs put down that we agreed long ago with them not to speculate on final outturn and programme in the formal periodic report until we had some certainty.”

In response, Coyle said:

“I have a list of issues with Mr Ramsay over the last few months where he has not been acting in the spirit of supporting the project.”

⁷¹ TRI00000097_0043 para 249

⁷² CEC00374576_0003

⁷³ CEC00374576_0001

All of this tends to suggest that the issue lay more with Mr Ramsay himself than it did with TIE's reporting.

Ramsay's specific complaints about TIE's reporting of the outcomes of adjudications are further addressed in Section 8F below. His complaint about reporting in relation to programme is dealt with in Section 5C.

(2) PROCUREMENT

TIE's procurement strategy was proposed to minimise cost through disaggregation of the project and through novation to transfer risk contractually⁷⁴, based on the model that the then Project Director Ian Kendall had used for the DLR project⁷⁵. However in the view of Professor Flyvberg:

“the risk mitigation effect of the Edinburgh Tram project’s procurement strategy was untested at the final business case stage and in hindsight might be considered optimistic.”⁷⁶

According to Stuart Fair's assessment of the strategy:

“the highly complex contractual position, in reality, set the conditions which ended with conflict, delay and a significant recalibration of outcomes.”⁷⁷

and:

“The project itself was beset with many difficulties from the very start, and looking at the evidence, it felt like these initial difficulties set the scene, and the die was cast for significant problems to arise, and they emerged from these initial difficulties and weaknesses.”⁷⁸

⁷⁴ TRI00000264_0019 para 3.10, TRI00000265_0019 para 7.9

⁷⁵ TRI00000043_0004 para 9, CEC01348426_0012 para 10.1

⁷⁶ TRI00000265_0012

⁷⁷ TRI00000264_0083 para 5.2

⁷⁸ Stuart Fair transcript 132.18-132.22

Kendall's immediate successor Andy Harper considered that the procurement model was:

*“unnecessarily complex as it relied on multiple contractual novations, which from experience seldom work well.”*⁷⁹

However Harper considered that his remit was to drive the process forward but, in doing so, not to revisit Kendall's procurement process⁸⁰. This may have contributed to 'lock-in' at the project level, as described by Fair⁸¹.

Generally speaking, none of the SETE group were directly involved in either the development of the procurement strategy nor in the Infracore procurement process⁸².

David Mackay concurred with the general consensus that the strategy, particularly to disaggregate the contracts, was a mistake⁸³. It led to various problems being “baked in” to the project⁸⁴ by the time he and then **Richard Jeffrey** took the helm at TIE.

Steven Bell did not formally transition to his role as Project Director until the first quarter 2008, with some overlap occurring at that time with his predecessor Matthew Crosse. It was intended that Crosse would remain responsible for the procurement phase and that Bell would be responsible for the delivery phase⁸⁵. Bell was however involved to some extent in negotiation of two agreements at the tail end of the

⁷⁹ TRI00000043_0004 para 9

⁸⁰ TRI00000043_0016

⁸¹ cf WED00000645_0003, TRI00000264_0011 para 1.18

⁸² Steven Bell and Susan Clark were members of the Infracore tender evaluation panel. However that involved implementing a strategy which had already been agreed, rather than developing it: TRI00000109_0007, TRI00000112_0017

⁸³ TRI00000113 paras 4, 9, 16

⁸⁴ CEC00376412, CEC00679607_0001, TIE00894394 pages 5-6

⁸⁵ Matthew Crosse transcript 7.22-8.1, TRI00000109 para 2.1, 5.1

procurement process, namely the Citypoint Agreement in March 2008 ⁸⁶ and the Kingdom Agreement in April ⁸⁷. He had not been involved in the Rutland Square Agreement in February ⁸⁸, which was concluded by Crosse on behalf of TIE ⁸⁹.

The Citypoint Agreement is considered in Section 5A below. Bell's limited involvement in the negotiation of the Infracore contract and in particular Schedule Part 4 is considered in Section 7 and Appendix 2.

The Kingdom Agreement was the ultimate result of a last minute demand for a price increase by Bilfinger Berger announced by telephone on 30 April 2008 ⁹⁰. Bell doubted the credibility of the consortium's justifications for this increase given that no such issues had been flagged during a meeting between the parties two weeks earlier ⁹¹. In evidence, Scott McFadzen of Bilfinger suggested that this demand was borne out of increasing alarm that this was "not going to be a good project" given the lateness of the design and MUDFA and the consequent likelihood of disputes emerging ⁹². This does not accord with the reasons given by the consortium at the time, which were that the additional £12m was as a result of "fluid market conditions" ⁹³. McFadzen's written statement indicated that the £12m was to cover inflation costs on materials ⁹⁴. Bell's

⁸⁶ CEC01463888. It should be noted that in providing his statement, Bell confused the Citypoint Agreement with the earlier Rutland Square Agreement in February (TRI00000109_0043 para 29.1)

⁸⁷ WED00000023

⁸⁸ Steven Bell transcript 62.20-62.25 (Tuesday 24 October)

⁸⁹ CEC01284179_0005

⁹⁰ CEC01274958

⁹¹ TRI00000109_0060 para 46.3, CEC01338847_0003

⁹² Scott McFadzen transcript 111.21-12.7

⁹³ CEC01275063_0002, see also Richard Walker transcript page 103.19-104.13 and TRI00000037_0105 para 321

⁹⁴ TRI00000058_0048 para 168

doubts about the credibility of the consortium's claims appear therefore to have been well founded.

The process by which the Kingdom Agreement was negotiated is set out in the 'Record of Recent Events' which formed part of the Close documents. This set out that the alternatives to reaching agreement with Bilfinger on the additional payment (introducing a new civils contractor to work with Siemens, returning to the unsuccessful bidder, or full scale reprocurement) were all forecast to be more costly options ⁹⁵.

The agreement ultimately reached comprised a phased incentivisation payment of £4.8m, and a further compensation payment of £3.2m in the event that Phase 1b did not proceed. In return, Infraco withdrew a number of outstanding issues, provided indemnities, waived rights to time relief or payment from events during the four months preceding contract award, capped road reconstruction costs at £1.5m (see Section 6C) and accepted the risk of changes from early release of IFC information ⁹⁶. Accordingly, to offset the increased cost, conditions 3-8 of the Agreement provided (according to the CEC Executive):

“a range of negotiated improvements in favour of tie Ltd and the Council in order to reduce the risk of programme delays and minimise exposure to additional cost pressures, as well as better contractual positions”

to offset the increased cost. ⁹⁷

⁹⁵ CEC01338847 pages 6-8. See also TRI00000113_0038 para 137, CEC01231125, TIE00359941.

⁹⁶ WED00000023

⁹⁷ CEC01246115, TRI00000109_0065 para 51

It was suggested during the Inquiry hearing that the incentivisation payment did not appear to be dependent upon completion by a certain date ⁹⁸. However, the payment was specified to fall due on completion “as detailed on the Contract Programme in Schedule Part 15” ⁹⁹. Schedule Part 15 set out clearly the sectional completion dates to be achieved ¹⁰⁰.

⁹⁸ Michael Flynn transcript 83.3.83.16

⁹⁹ WED0000023_0001

¹⁰⁰ USB00000080. See also TRI00000109_0064 Q50.

(3) DESIGN

3A – TIE management of SDS

It is uncontroversial to say that the lateness of design was a perennial problem for the project. The problems appear to have begun almost from the inception of the SDS contract in 2005: Alistair Richards considered that the problems originated with the appointment of Parsons Brinckerhoff instead of Faber Maunsell and Mott McDonald who had taken the design through the parliamentary process ¹⁰¹. Both **Steven Bell** and **Susan Clark** inherited some responsibility for design issues around 2007 due to Ms Clark's promotion to deputy Project Director and Bell's 'troubleshooting' role as Engineering and Procurement Director.

Notably, David Crawley and Tony Glazebrook were recruited in 2007 to resolve the issues with SDS which Crawley had identified ¹⁰² in a review commissioned by Bell ¹⁰³. They then dealt with a number of critical issues which had led to a complete blockage and the SDS team temporarily leaving Edinburgh ¹⁰⁴. These issues were unpicked through to July of that year at which point design progress appears to have picked up again ¹⁰⁵. Meanwhile Damian Sharp, who was the TIE Design and Consents Manager from 2007 to 2011, noted both the SDS underperformance ¹⁰⁶ and the extent to which

¹⁰¹ TRI00000116_0004 Q4a

¹⁰² TRI00000030_0002

¹⁰³ CEC01811257, Matthew Crosse transcript 30.25-31.21

¹⁰⁴ David Crawley transcript 19.8-19.11, TRI00000109_0019 Q9

¹⁰⁵ David Crawley transcript 19.12-19.19

¹⁰⁶ Damian Sharp transcript 143.1-7 – a view shared by others in TIE: Matthew Crosse transcript 54.19-54.23, Graeme Barclay transcript 62.2-62.23

they were being held up by decisions being needed from others ¹⁰⁷, particularly CEC who were asking for things which were inconsistent with the Tram Design Manual ¹⁰⁸. Trudi Craggs, one of Sharp's predecessors in the role, noted that a lack of engagement by CEC may have cost the project six to nine months in delay in the earlier stages ¹⁰⁹.

SDS were likewise critical of CEC as the major party responsible for delay to the whole programme¹¹⁰, noting that CEC as the planning authority were "holding everything up" whereas TIE were trying to move the project along ¹¹¹. On TIE's side, Glazebok entirely shared the sentiment that CEC:

*"directed its energies into constant interference and rejection of offered design"*¹¹².

SDS also conceded their own poor management and performance ¹¹³.

Post financial close in May 2008 responsibility for progressing the design passed to the Infracore under the novation agreement, which is covered in Section 3C below.

¹⁰⁷ Damian Sharp transcript 143.1-7

¹⁰⁸ Damian Sharp transcript 154.12-155.2

¹⁰⁹ CEC02084810_0003. Echoed by Steve Reynolds of SDS: TRI00000069_0032 para 107.

¹¹⁰ TRI00000069_0091 para 267

¹¹¹ TRI00000069_0090 para 265-266, Jason Chandler transcript 24.12-24.20

¹¹² TRI00000039_0005 Q8.1

¹¹³ PBH00020993, PBH00028568

3B – Provision for design risk

In the course of the Inquiry there has been discussion of the adequacy of the provision for design delays in TIE's risk allowance at financial close. In particular, it has been highlighted that there was a suggestion by the Council's 'B team' for a £25 million risk premium to cover this issue. The evidence which was led suggested that this was discussed with **Steven Bell** and **Susan Clark**, amongst others. It should be noted however that neither Bell nor Clark were asked about this issue in either written or oral questions.

A provision of £3.3m to cover delay in submission of SDS designs was included in the risk allowance. Donald McGougan raised this issue at the February 2008 TPB meeting, where it was noted that neither the consortium nor the failed bidder had been prepared to take on this particular risk ¹¹⁴.

The suggestion for a further risk premium over and above this appears to have been made by Duncan Fraser following his review of the Draft Final Business Case. In particular, he felt that the risk allowance of £3.3m for the late arrival of IFC drawings was insufficient given the likelihood of changes, and that neither Bell nor Clark, who met with him to discuss the issue, convinced him otherwise ¹¹⁵. Accordingly he proposed a risk premium of £25m, which he said that they were unhappy with ¹¹⁶.

114 CEC01246825_0006

115 Duncan Fraser Transcript 84.17-85.2

116 Duncan Fraser Transcript 85.21-86.1.

This proposal was inserted by Fraser into a draft Council report for 20 December 2007¹¹⁷, following a suggestion to his superior Andrew Holmes¹¹⁸. Holmes however instructed him to remove it¹¹⁹, resulting in a 'compressed' report¹²⁰. In evidence, Holmes indicated that he would have questioned how the £25m figure was made up¹²¹. He claimed not to recall any discussion about the issue at the IPG meeting¹²² despite Fraser's comment in the email:

"At the last IPG I raised this topic however there was a concern about such a statement being minted." (sic)¹²³

Two months later, on 28 February 2008 there was an exchange in CEC Legal between Colin Mackenzie and Gill Lindsay where the latter stated that:

"I believe that the residual risk re SDS may be very significant... the previous level of £3m is appearing to me grossly undervalued"¹²⁴.

Despite this, Lindsay together with other senior CEC officers recommended to Tom Aitchison that the contract be concluded in May, with the provision for design risk remaining at the same level.

117 CEC01384000

118 CEC01383667

119 Duncan Fraser Transcript 86.2-86.4

120 CEC01384036

121 Andrew Holmes Transcript 34.16-34.19. According to Fraser's B Team colleague Rebecca Andrew, "[t]here was no science to the £25m figure" (TRI00000023_0040 Q39(3)).

122 Andrew Holmes Transcript 35.4-35.10

123 CEC01383667

124 CEC01400987

Mackenzie in evidence said that he shared these concerns ¹²⁵. On 10 April 2008, Mackenzie sent an email to Andy Conway with concerns about delay to the approvals process for Russell Road Bridge ¹²⁶. In evidence he said this might have had a potential cost of £2 million ¹²⁷.

In the report to the IPG, a figure “in excess of £2m” was given as the cumulative cost for delay in approvals at three locations on the critical path, namely Haymarket Tramstop and Gogar Depot in addition to Russell Road Bridge¹²⁸. Mackenzie’s concern was that this amounted to a significant portion of the £3.3m allowance in the budget. He nevertheless instructed the recipients of the email, which was shared widely within CEC, not to discuss the matter with TIE ¹²⁹. The email exchange notes that Conway had an ‘unsatisfactory’ exchange with Damian Sharp on the issue, albeit that Sharp was not questioned in relation to this matter.

Mackenzie conceded that CEC moved forward “with their eyes fully opened in relation to that risk” ¹³⁰. The terms of the IPG report noted above confirm this. The Council’s Chief Executive said the £2m figure was in any event exaggerated ¹³¹ and the actual cost was much lower; he considered that appropriate financial provision had been made for the risk ¹³². Likewise the Council’s Finance Director was content that this potential £2m risk was covered within the £3.3m allowance ¹³³: TIE and CEC were clear that they

125 Colin MacKenzie Transcript 70.16-70.19

126 CEC01401109

127 Colin Mackenzie Transcript 82.14-82.18

128 CEC01246992_0005

129 CEC01401109_0006

130 Colin Mackenzie Transcript 109.24-110.1

131 Tom Aitchison Transcript 113.2-113.10

132 Tom Aitchison transcript 114.1-114.5

133 Donald McGougan Transcript 22.24-23.7 (Thursday 30 November)

would not, as client, initiate any post-contract changes; normal design development was a risk for the contractor (see section 7 below); and CEC had supplemented staff for approvals¹³⁴. In addition there were three significant areas of provisional sums specifically earmarked to cover Forth Ports, Picardy Place and Murrayfield¹³⁵.

Mackenzie noted that TIE assurances on the £3.3m allowance came from Stewart McGarrity¹³⁶. An email of 29 November 2007¹³⁷ shows that it was McGarrity who suggested that Fraser meet with Clark and Bell to discuss the issue. McGarrity's written comments on the proposed £25m premium were:

*"Alarm bells all over the place – what additional £25m???"*¹³⁸

In his own evidence, McGarrity noted that it was important to differentiate between design evolution and changes in scope¹³⁹, as he had commented in relation to paragraph 3.3 in the same document:

*"there is no ability to absorb scope changes here"*¹⁴⁰.

He understood that Fraser's proposed £25m was to cater for design scope changes as described in that paragraph¹⁴¹. Whilst an allowance could have been added for scope changes by CEC, McGarrity's view was that this should not have been incorporated into

134 Donald McGougan Transcript 46.4-46.15 (Thursday 30 November)

135 Donald McGougan Transcript 47.4-47.10 (Thursday 30 November)

136 TRI00000054_0082, para 172

137 CEC01383999

138 CEC01384000_0003

139 Stewart McGarrity transcript 130.19-131.2 (Tuesday 12 December)

140 CEC01384000_0002

141 Stewart McGarrity transcript 133.7-133.8 (Tuesday 12 December). This is also the understanding of Bell and Clark.

TIE's budget ¹⁴². Accordingly the report to the Council by CEC officers in December 2007 set out that:

“The risk contingency does not cover major changes to scope... Changes to the programme could involve significant costs, not currently allowed for in the risk contingency” ¹⁴³.

¹⁴² Stewart McGarrity transcript 134.11-134.17 (Tuesday 12 December)

¹⁴³ CEC02083448_0007 para 8.16

3C – Infraco management of SDS

Following contract close in May 2008, responsibility for progressing the design – and thus for managing the designer - passed to the Infraco under the SDS Novation agreement ¹⁴⁴. Whilst the design had been 66% complete at November 2007 ¹⁴⁵ (in line with the original estimate in the draft Interim Outline Business Case ¹⁴⁶), by November 2010, a full three years later, it was still only 80% complete ¹⁴⁷. It was unclear to TIE what BSC was doing to manage SDS. Evidence of their actions was sought but never provided¹⁴⁸. In October 2008 SDS highlighted issues with the absence of Siemens trackform and OLE design and low volume of activity on BSC design development ¹⁴⁹. By May 2009, SDS noted that changes were still being instructed and it was accordingly not possible to define an end date ¹⁵⁰. In the same month, there was concern within Siemens that it was late in its review of the SDS design ¹⁵¹.

According to Bilfinger's Project Director, Parsons attempted to evade responsibility ¹⁵² and were "slow and under-resourced" ¹⁵³. He was of the view that Parsons:

*"were just fee earning when they could... they were probably putting some reasonably lightweight guys on it because they did not think it really mattered."*¹⁵⁴

¹⁴⁴ CEC01880421

¹⁴⁵ CEC01023764_0012

¹⁴⁶ CEC01875336_0054 para 5.7.1

¹⁴⁷ TIE00896978_0009

¹⁴⁸ Damian Sharp transcript 170.20-170.22

¹⁴⁹ CEC01149381

¹⁵⁰ PBH00003626

¹⁵¹ SIE00000211

¹⁵² TRI00000058_0044 para 156

¹⁵³ TRI00000058_0012 para 42

¹⁵⁴ TRI00000058_0008 para 28

The poor performance by Parsons continued after novation ¹⁵⁵. According to Martin Foerder however, there was “not a high motivation to get things done” on Bilfinger’s part, standing the contractual disputes ¹⁵⁶. It also appeared that Infraco changed many designs to suit their own design and risk agenda ¹⁵⁷.

Around December 2009, Bilfinger entered into a side agreement with SDS, which was not intimated to TIE despite the requirements of clause 11.5 of the Infraco contract ¹⁵⁸ and formal requests by DLA ¹⁵⁹. The motivation to reach such an agreement appeared to stem from a recognition by Infraco of:

*“BB/Siemens failure to provide design information, carry out the CIDR etc in time and in accordance with the current design programme. This could result in Infraco being exposed under the Infraco contract if as a result of the OSSA or success in the adjudications, TIE instructs or Infraco become obliged to proceed with the works – **for which there is no design at this time as a result of Infraco failures**” ¹⁶⁰.*

There was also a desire:

“to have SDS ‘on side’ to assist with future ND claims” ¹⁶¹.

¹⁵⁵ TRI00000058_0052 para 178

¹⁵⁶ Martin Foerder transcript 69.14-69.17

¹⁵⁷ TRI00000039_0034 para 58(6)

¹⁵⁸ CEC00036952_0034

¹⁵⁹ e.g. CEC00337893

¹⁶⁰ CEC00328711_0002 (emphasis added)

¹⁶¹ *ibid*

Clause 9 of the agreement required SDS to take all measures and provide all information which Infraco required to obtain TIE's acceptance that:

"identified design changes not yet instructed by TIE... are TIE changes under the Infraco contract" ¹⁶².

SDS were accordingly incentivised to assist Bilfinger in substantiating claimed changes for which Bilfinger sought additional costs. DLA raised concerns with Parsons directly on this issue, noting that:

"Our clients remain seriously concerned over the programme and cost implications of the unusually high volume of design changes or alleged design changes that are still appearing and causing claims relating to design development." ¹⁶³

TIE ultimately served Infraco with Remediable Termination Notices both in relation to this unapproved side agreement ¹⁶⁴ as well as for the failure by the Infraco to deliver an assured integrated design ¹⁶⁵.

By the time of Mar Hall in March 2011, there were 2872 open technical approval comments on the design, which were reduced after mediation to 85 in a matter of two weeks ¹⁶⁶. Damian Sharp was closely involved in this process on the TIE side and formed the clear view that BSC knew what they were going to do to clear the majority of

¹⁶² TRI00000011_0003

¹⁶³ CEC00337893

¹⁶⁴ CEC02084521

¹⁶⁵ CEC02084522

¹⁶⁶ CEC02083973_0118

these items, but were withholding from doing so for tactical reasons: it was not feasible for the number of drawings to have been produced in that timescale ¹⁶⁷. Martin Foerder admitted in his witness statement that SDS had been incentivised to finish off design without TIE's knowledge ¹⁶⁸, but equally confirmed that the consortium did not progress design between October 2010 (when it downed tools ¹⁶⁹) and March 2011 ¹⁷⁰.

In a March 2011 report commissioned by TIE, Acutus concluded that:

“late delivery of design is a most significant source of delay and appears to be the dominant cause of delay to the overall delivery of the Infraco works in most, if not all, parts of the tram route” ¹⁷¹.

This is covered further in Section 4B below.

¹⁶⁷ Damian Sharp transcript 178.6-181.3

¹⁶⁸ TRI0000095_0052, para 162, Martin Foerder transcript 95.2-95.22

¹⁶⁹ TIE00409574

¹⁷⁰ Martin Foerder transcript 162.10-162.18

¹⁷¹ WED00000533_0114 para 13.1.1.

(4) UTILITIES

4A – Problems with MUDFA

Whilst the impact of MUDFA delays on the Infracore construction programme is considered in Section 4B below, there is a broad consensus that significant difficulties were experienced with utilities diversions on the project. It was recognised that significant effort was put into MUDFA by TIE ¹⁷². TIE had a dedicated Commercial Manager (John [Casserly](#)) and Construction Director (Graeme Barclay) for the MUDFA works. Both **Steven Bell** and **Susan Clark** held responsibility in their supervisory roles. It is of significance to note that:

- Cooperation by the statutory utility companies (SUCs) in providing records and approvals was less than satisfactory ¹⁷³ and their records were inaccurate ¹⁷⁴.
- This led to a number of unexpected finds during the course of the works ¹⁷⁵, including double the number of expected utilities found ¹⁷⁶, and various other issues like archaeological remains and a leper colony ¹⁷⁷. Risks associated with MUDFA were consistently flagged up in reports to CEC ¹⁷⁸.

¹⁷² Duncan Fraser transcript 23.16-23.24

¹⁷³ Matthew Crosse transcript 119.11, Andrew Malkin transcript 188.12-188.13

¹⁷⁴ James McEwan transcript 164.14-164.16, Graeme Barclay transcript 24.19-24.22, TRI00000112_0045 Q74, TRI00000109_0011 Q7

¹⁷⁵ Steven Bell transcript 177.15-177.20 (Tuesday 24 October), Susan Clark transcript 134.7-134.8

¹⁷⁶ Graeme Barclay transcript 30.21-31.11

¹⁷⁷ TRI00000109_0022 Q11(1)

¹⁷⁸ Tom Aitchison transcript 4.18-4.20, 8.21-8.23, 88.10-88.16, 93.8-93.13

- Ground-penetrating radar had been employed by SDS to scope out potential difficulties but it was not entirely reliable ¹⁷⁹. Digging trial holes gave a clearer picture but was wholly impractical to carry out along the whole route, so the focus was on areas which appeared to be congested based on the records ¹⁸⁰. TIE contra-charged SDS for trial holes which it instructed the MUDFA contractor to carry out ¹⁸¹.
- The congested utilities and unexpected finds led to a 180% increase in the scope of the works ¹⁸², from an initial 27 kilometres to almost 50 kilometres during the period of TIE's involvement in the project ¹⁸³.
- The unexpected finds and increase in scope meant that even though the MUDFA works had a contingency allowance of 87% (£35m against a budget of £40m), a "substantial amount of money" ¹⁸⁴, that allowance proved nevertheless to be inadequate ¹⁸⁵. The initial 'float' in the programme was also consequently eroded¹⁸⁶.

¹⁷⁹ Graeme Barclay transcript 39.21-39.25

¹⁸⁰ Graeme Barclay transcript 40.9-40.17

¹⁸¹ Graeme Barclay transcript 39.1-39.7

¹⁸² Dave Anderson transcript 132.19-133.1

¹⁸³ TRI00000109_0157 para 131

¹⁸⁴ Tom Aitchison transcript 89.19-89.20, CEC01559075_0004

¹⁸⁵ John Casserley transcript 63.17-64.6

¹⁸⁶ SWT00000056_0004, CEC01018359_0035

- The design for the utilities diversions produced by the SDS subcontractor Halcrow was itself late ¹⁸⁷, going back to the period predating Bell and Clark's involvement ¹⁸⁸.
- There was poor performance by Carillion ¹⁸⁹, leading to TIE winding down their involvement and awarding outstanding sections of the work to other contractors¹⁹⁰. The work handed over to Clancy Dowcra amounted to 57% of the diversions in Section 1a of the route, whilst Farrans were contracted to carry out 100% of the diversion work in Section 7b ¹⁹¹.
- Carillion sought to blame their poor performance on, amongst other things, resourcing issues ¹⁹², citing the delays in design ¹⁹³. However the terms of the MUDFA contract made clear that the drawings would not be complete at the outset ¹⁹⁴ and that the contractor and the designer were required to work together to achieve an efficient design and buildability ¹⁹⁵ and to provide support to TIE and the designer to obtain approvals and agreement with the SUCs ¹⁹⁶. Carillion

¹⁸⁷ Steven Bell transcript 177.7-177.11 (Tuesday 24 October), Susan Clark transcript 139.10-139.22

¹⁸⁸ Matthew Crosse transcript 6.24-6.25, 7.22-7.25, 8.1, 12.21-12.25

¹⁸⁹ TRI00000024_0063 para 201, CEC01145983, James McEwan transcript 162.5-162.22, 164.17-164.21, 167.7-167.19

¹⁹⁰ CEC00245907_0006, TRI00000109_0143 para 114. There appears to have been some confusion as to the extent of this, it having been suggested that fresh contractors were brought in to complete less than 4% of the work (see Graeme Barclay transcript 74.17-74.22, 75.10-75.25, 76.1-76.6). However, the 96% completion figure given in August 2009 was explicitly related to the work which was left in Carillion's hands *after* this exercise; prior to this 22% of the overall utilities diversion work was incomplete (CEC00843272_0055).

¹⁹¹ Graeme Barclay transcript 74.11-74.25, CEC00843272_0055, CEC00739552_0014

¹⁹² Andrew Malkin transcript 118.16-118.25, 119.21-119.25

¹⁹³ Andrew Malkin transcript 156.9-156.25, 158.15-158.25, 159.1-159.3

¹⁹⁴ CAR00000300 Sch 1 c2.2

¹⁹⁵ CAR00000300 Sch 1 c2.10

¹⁹⁶ CAR00000300 Sch 1 c2.41.5

also sought to allocate blame on other issues which were contractually their responsibility ¹⁹⁷.

- Utilities diversion work was subject to strict traffic management constraints and city embargoes at different times of year ¹⁹⁸.
- Due to the difficulties experienced, Carillion sought to move to a cost plus contract ¹⁹⁹. This was rebuffed by Bell who held them to their original obligations²⁰⁰. Carillion were granted extensions of time ²⁰¹, but this related to the additional work standing the increase in scope noted above and did not imply that Carillion were not at fault ²⁰².
- Utilities conflicts in areas already worked on by Carillion were subsequently established by Turner & Townsend ²⁰³. It should be noted that the settlement agreement between TIE and Carillion in November 2010 had specifically set out that:

“this Agreement does not settle and TIE shall not be deemed to have waived any liability or obligation of the MUDFA contractor to TIE arising out of or in respect of any defects in the MUDFA works”²⁰⁴.

¹⁹⁷ Such as the lack of hazard reports – Andrew Malkin transcript 183.6-183.14, CAR00000340 Sch 1 c2.42, c5.1.6

¹⁹⁸ Steven Bell transcript 177.1-177.20, 187.20-187.23, 190.6-190.8 (Tuesday 24 October)

¹⁹⁹ CAR00000301, Graeme Barclay transcript 71.1-71.5

²⁰⁰ CAR00000340, James McEwan transcript 165.21-166.4, Graeme Barclay transcript 72.1-72.12

²⁰¹ CAR00000194, CAR00000163, CAR00000145

²⁰² Graeme Barclay transcript 111.1-111.14

²⁰³ Julian Weatherley transcript 76.5-76.25

²⁰⁴ TIE00094413_0002 c5.1

4B – Impact of MUDFA delays

In April 2009, TIE instructed Acutus, an independent construction consultancy, to assess two claims by BSC, both relating to the delay associated with the MUDFA works ²⁰⁵.

Acutus noted that BSC made claims supported only by selective information despite the requirements of the contract²⁰⁶; BSC impacted MUDFA delays into the baseline programme, but did not take into account other events ²⁰⁷. By Acutus' assessment, other factors appeared to be more significant in delaying the work including, significantly, the lack of progress on design ²⁰⁸. By the time of these claims, responsibility for production of the design lay with the consortium, and TIE had little visibility on the issue ²⁰⁹. By obtaining an extension of time based on utilities delays, BSC could protect itself against liability for delays in producing the design ²¹⁰.

When submitting INTC 429 in October 2009 for £4.3m of additional costs relating to the MUDFA Rev 8 programme, BSC claimed that MUDFA was “the dominant cause of delay on the project” ²¹¹. Acutus noted that this was a questionable claim not least because

²⁰⁵ Robert Burt of Acutus found **Bell** and **Clark** “to be very professional and conscientious individuals, who cared strongly about the project, its successful completion and that the rights and the obligations of each party to the contract were adhered to” (TRI00000146_0044 para 128). His colleague Iain McAlister found Clark, **Hickman** and Bell all “to be particularly hard working and conscientious... They all appeared to me to be people who really cared about the project and gave of their all to try to resolve the difficulties it faced.” (TRI00000122_0023 para 52)

²⁰⁶ Iain McAlister transcript 170.21-171.14 (Tuesday 21 November)

²⁰⁷ Iain McAlister transcript 172.2-172.6 (Tuesday 21 November)

²⁰⁸ Iain McAlister transcript 172.10-172.23 (Tuesday 21 November)

²⁰⁹ TRI00000122_0019

²¹⁰ Iain McAlister transcript 181.17-182.4, 182.21-183.4 (Tuesday 21 November)

²¹¹ DLA00001692

there were 428 notified changes which preceded it ²¹². It was apparent to Acutus that there were areas where work was not impacted by the MUDFA delays but nevertheless had not been commenced by Infraco ²¹³.

The Acutus report in December 2009 concluded that Infraco was not fulfilling its obligations under the contract, by failing to commence work and failing to substantiate change notices:

“Infraco’s failure to notify, record and include in its claims delays for which it carries liability are distorting the delay analyses it is presenting. It would appear that such actions and inactions give rise to overstated claims for entitlement to extension of time.” ²¹⁴

Acutus produced another report in June 2010 ²¹⁵, to assess concurrent delays and the extent of TIE’s liability. The investigations indicated that both parties to the Infraco contract bore some responsibility for delays (MUDFA being the significant element to TIE’s account) ²¹⁶, albeit that this investigation was based on incomplete information, particularly a lack of information available to TIE about the design ²¹⁷.

²¹² Iain McAlister transcript 175.7-175.8 (Tuesday 21 November)

²¹³ Iain McAlister transcript 172.10-172.16 (Tuesday 21 November)

²¹⁴ CEC00583955 para 1.4.3, Iain McAlister transcript 203.5-203.13 (Tuesday 21 November)

²¹⁵ CEC00330652

²¹⁶ Iain McAlister transcript 172.20-172.24 (Tuesday 21 November); Robert Burt transcript 153.19-153.24, 155.3-155.7

²¹⁷ Iain McAlister transcript 172.12-172.19 (Tuesday 21 November); Robert Burt transcript 147.1-147.5

A further draft report by Acutus in March 2011²¹⁸ was prepared in anticipation of adjudication on INTC 536, BSC's further – and significantly larger - estimate of £42.8m for utilities delays to July 2010²¹⁹:

- Acutus' analysis showed that there was far greater delay than that claimed in the INTC estimate, which indicated that factors other than MUDFA were in fact dominant. For instance, the projected delay to the Sectional Completion Date for Section B claimed by Infraco was 286 days, whereas the actual progress on design and construction - based on Infraco reports - gave a projected delay on the same section of 537 days²²⁰.
- Acutus observed that INTC 536 incorporated eight prior INTCs on specific areas of the route which had already been covered by INTC 429²²¹.
- Acutus further noted that the adjudicator's decision on INTC 429 (to award 154 days extension in Section A and nil in Section B²²²) remained binding on the parties as there had been no changed circumstances or further utilities delays in those sections²²³: however, Infraco had claimed for longer extensions on these sections in INTC 536.

²¹⁸ WED00000533

²¹⁹ Iain McAlister transcript 7.18-8.14 (Wednesday 22 November), BFB00003297_0087

²²⁰ WED00000533 para 1.8.2

²²¹ WED00000533 para 5.2.10

²²² CEC00310163_0002. TIE had offered 180 days (six months) costs (DLA00001717).

²²³ WED00000533_0011 para 1.9.2

- Acutus also found that Infraco had inflated their claims in Section C (Phase 1a construction complete) and Section D (Open for Revenue Service) despite the adjudicator having previously awarded nil for each of those sections ²²⁴.

Acutus considered that the dominant causes of delay on the project were not therefore the utilities diversions but rather the late delivery of design ²²⁵, together with Infraco's refusal to commence work on available sites pending resolution of disputes ²²⁶. This is at odds with the position of BSC as indicated above.

TIE obtained senior counsel's Opinion that the contractor would have no entitlement to an extension of time if the dominant cause of delay was the contractor's risk event ²²⁷.

This was accordingly reflected in TIE's mediation statement, drafted by McGrigors:

*"Infraco could be carrying out works across a significant portion of the route – but are not... Clause 65.11 provides that 'notwithstanding the occurrence of a Compensation Event, the Infraco shall continue to carry out the Infraco works'... Infraco's claims in relation to INTC 536 are rejected in their entirety. The true causes of delay in connection with the project are the responsibility of Infraco."*²²⁸

BSC's position nevertheless appears to have been conceded by CEC at Mar Hall²²⁹, which is considered further in Section 10B below.

²²⁴ CEC00310163_0002, WED00000533_0012 para 1.10.4. Infraco had claimed 257 days in these Sections (WED00000533_0017).

²²⁵ WED00000533 para 13.1.1

²²⁶ WED00000533 para 1.8.4, para 11.7.3

²²⁷ TIE00095607_0016 para 36.

²²⁸ BFB00053300 para 5.8, 7.3.1, 8.1, 8.2.

²²⁹ WED00000134_0234.

(5) PROGRAMME

5A – Consideration of pausing procurement programme

It has been generally recognised that at the latter stages of the programme to procure the Infracore and Tramco, both the design and the utilities diversions were delayed. Accordingly, several individuals suggested that a pause in the procurement programme may have been beneficial in order to allow these elements to catch up. This first appears to have been proposed by Trudi Craggs in 2006 and again in 2007. On each occasion Ms Craggs suggested that **Susan Clark** was one of those against such a pause²³⁰. On both occasions however, that opposition was echoed by others, including the Project Director Matthew Crosse²³¹, Clark's superior.

David Crawley also suggested an extension of the procurement programme in 2007, but was told by Crosse that this was not acceptable and that there was a political imperative to keep to the programme²³². This was echoed by the Chief Executive Willie Gallagher as well as **Steven Bell** at that time²³³.

Tony Glazebrook also proposed a pause in the programme to Crosse, feeling that the latter's demeanour indicated that he felt unable to do so²³⁴.

²³⁰ Trudi Craggs transcript 108.12-108.24

²³¹ Trudi Craggs transcript 109.19-109.24

²³² David Crawley transcript 50.14-50.23

²³³ David Crawley transcript 79.8-79.10

²³⁴ Tony Glazebrook transcript 158.19-158.22

Steve Reynolds likewise formed the impression from speaking with Crosse that there was a political need to move forward ²³⁵. In an internal email in January 2008 Reynolds noted:

“The sensible course of action which everyone except TIE understands is to delay novation to the point where the design is nearer 100% complete – to be fair even Gallagher sees this as a potential option. The likes of Crosse and Gilbert though are being more blinkered – driven largely by their desire to be clear of Edinburgh as soon as the BBS ink is dry on the deal.” ²³⁶

Crosse himself explained that the importance of sticking to the programme was because costs would go up as delays increased ²³⁷. The decision to proceed followed from the Parliamentary decision in mid 2007 and the Audit Scotland review ²³⁸. Clark confirmed that there was concern that a pause in the programme might lead to one or more of the bidders dropping out ²³⁹ in a situation where there were only two parties competing for the Infraco contract. Once BBS became the preferred bidder, pausing the programme would likewise cause (in Bell’s words):

“pressure against the Infraco price if the process was extended significantly” ²⁴⁰.

²³⁵ Steve Reynolds transcript 30.12-30.25

²³⁶ PBH00033339_0001

²³⁷ Matthew Crosse transcript 124.13-124.18

²³⁸ Matthew Crosse transcript 125.13-125.20

²³⁹ Susan Clark transcript 173.11-173.14

²⁴⁰ TRI00000109_0033.

Gallagher indicated that prolongation costs and operating costs would have made the option to pause financially unviable ²⁴¹. Jim McEwan considered that the potential supply chain cost increases from any pause would likely be in the tens of millions ²⁴².

Outwith TIE, CEC's Chief Executive confirmed that there was a tone at the end of 2007 that Councillors wanted to move forward quickly ²⁴³. Had the contract been paused for completion of the design, the tram may never have been built ²⁴⁴. CEC's Finance Director echoed this sentiment ²⁴⁵, as did the Director of City Development ²⁴⁶.

Accordingly whatever the views of Clark or Bell, the decision to proceed appears to have been a decision taken at a higher level. In any event, this issue was in the main discussed without reference to the fact that the procurement process itself overran by four months from January to May 2008 ²⁴⁷ (during which time design and MUDFA works continued). The Citypoint agreement in March 2008 accordingly moved back the OFRS date in recognition of this ²⁴⁸, which meant that there was in fact a three month extension to the programme ²⁴⁹.

²⁴¹ Willie Gallagher transcript 47.2-47.25

²⁴² TRI00000057_0041 Q36(5)

²⁴³ Tom Aitchison transcript 100.25

²⁴⁴ Tom Aitchison transcript 147.5-148.6

²⁴⁵ Donald McGougan transcript 20.2-20.4 (Thursday 30 November)

²⁴⁶ Andrew Holmes transcript 102.3-102.6

²⁴⁷ TRI00000109_0026 Q16

²⁴⁸ CEC01463888

²⁴⁹ CEC02086755

5B – Consideration of pausing construction programme

Once the delivery phase of the project commenced, there appears to have been a further proposal to “pause” the project, when Jochen Keysberg suggested to **David Mackay** around December 2008 that construction could be suspended until design and utilities diversions were complete, in order to enable repricing and reprogramme ²⁵⁰. Keysberg’s evidence was that he foresaw the only alternative as moving to a cost plus contract ²⁵¹. This is illuminating as to Bilfinger’s state of mind going into the Princes Street dispute a couple of months later ²⁵².

According to Keysberg, demobilising for six months to a year would have been “cleaner” and could have cost less, despite the costs associated with demobilisation, subsequent remobilisation, and a year’s delay ²⁵³. He resisted the suggestion that Bilfinger would have sought to renegotiate the contract following any such pause ²⁵⁴. The credibility of that position requires to be judged in light of the consortium’s later attempts to move all on street works to a cost plus basis ²⁵⁵.

Mackay’s recollection was that Keysberg had suggested shutting down for up to two years, and that this proposal came at a time when only one kilometre of the whole route was “fettered” ²⁵⁶. As such it did not appear to be an attractive proposal and Mackay’s

²⁵⁰ Jochen Keysberg transcript 37.10-37.15

²⁵¹ Jochen Keysberg transcript 37.18-38.10

²⁵² See Section 8B below

²⁵³ Jochen Keysberg transcript 38.20-39.21

²⁵⁴ Jochen Keysberg transcript 40.2-40.13

²⁵⁵ e.g. TIE00031089

²⁵⁶ David Mackay transcript 105.2-105.3, CEC00131076_0001. See also BFB00053300_0010 para 6.3

fears related to the likely increase in price when the contractor eventually returned²⁵⁷. Stewart McGarrity echoed this, suggesting such a move would have simply given the contractor an opportunity to review the price altogether²⁵⁸. McGarrity agreed with Mackay that stopping at that stage would not have assisted in resolving the issues, and echoed the point that there was work available to be done at that time²⁵⁹.

²⁵⁷ David Mackay transcript 105.13-105.14

²⁵⁸ Stewart McGarrity transcript 87.15-88.8 (Thursday 14 December)

²⁵⁹ Stewart McGarrity transcript 88.15-88.17 (Thursday 14 December)

5C – Reports on programme

John Ramsay in his statement to the Inquiry was critical of TIE's reporting on programme, suggesting in particular that:

*“references by TIE to subsequent revisions viz Rev 1 or Rev 3 were always irrelevant... it was reported that BSC were reporting against a Rev 3A project programme and that TIE were reporting against a Rev 1 programme. This was typical TIE nonsense.”*²⁶⁰

The issue however appears to be Ramsay's failure to understand his brief. In oral evidence he admitted that he was unaware of the provisions in the Infraco contract that meant TIE had to approve programme variations²⁶¹, and that he did not know whether the Infraco's programme had been approved²⁶². This was despite the report (which he criticised) clearly stating that it had not²⁶³. He therefore conceded that TIE were in fact reporting against the only agreed programme²⁶⁴.

Susan Clark later explained that BSC's programme Rev 3A was not agreed as it could have resulted in additional costs²⁶⁵, for which no justification had been provided. By contrast, Infraco were obliged under the contract to produce a mitigated programme²⁶⁶ which they failed to do for a considerable period of time²⁶⁷. This led to difficulties

²⁶⁰ TRI00000065_0043

²⁶¹ John Ramsay transcript 115.23 (Thursday 28 September), CEC00036952_0140 c60.3

²⁶² John Ramsay transcript 116.13 (Thursday 28 September)

²⁶³ CEC00113638_0003

²⁶⁴ John Ramsay transcript 117.13 (Thursday 28 September)

²⁶⁵ Susan Clark transcript 176.12-176.23

²⁶⁶ CEC00036952_0140 c60.7

²⁶⁷ Susan Clark transcript 165.5-165.7

experienced by **Tom Hickman** as TIE's programme manager in being able adequately to report on programme to Transport Scotland ²⁶⁸. Martin Foerder conceded that BSC were contractually obligated to report against the agreed programme ²⁶⁹ but nevertheless attempted to justify the Infraco's departure from this contractual obligation on the basis that this programme was "unrealistic" ²⁷⁰.

This apparently led to a further difficulty after mediation following TIE's removal from the project. Infraco's Rev 3A programme was used as the new contractual baseline ²⁷¹, but it did not align with the programmes for design or utilities diversion ²⁷². The assumptions underpinning Infraco's Rev 3A programme also transferred risk from Infraco to CEC ²⁷³. TIE's chairman Vic Emery also considered this programme "too long" ²⁷⁴, despite being one of the key parties at Mar Hall who agreed to it.²⁷⁵

²⁶⁸ TIE00248213, Tom Hickman transcript 196.25-197.7

²⁶⁹ Martin Foerder transcript 117.7-117.8

²⁷⁰ Martin Foerder transcript 117.9-117.17

²⁷¹ TRI00000103_0008 Q6.8

²⁷² WED00000103_0061

²⁷³ WED00000103_0019

²⁷⁴ Vic Emery transcript 70.4-70.14

²⁷⁵ See Section 10B below

(6) RISK

6A – External review of risk

Duncan Fraser recommended that Turner & Townsend carry out a review of project risk in September 2007 and asked **Susan Clark** to set up an introduction ²⁷⁶. Rebecca Andrew said that Clark was concerned that this additional brief would distract TIE staff from urgent work which was required to meet the deadlines for the Final Business Case²⁷⁷. **Steven Bell** was concerned about the publication of the notice seeking tenders for this brief given the sensitivity of the work ²⁷⁸.

Clark asked the OGC team to include a review of risk as part of their remit ²⁷⁹. She considered this appropriate as the OGC team had carried out previous reviews of the project and were familiar with the issues ²⁸⁰. Matthew Crosse, at that time the Project Director, spoke with Malcolm Hutchison of the OGC team and indicated to Fraser (and to Fraser's superior Donald McGougan) that the OGC team could carry out the work and that if CEC approved, Turner & Townsend could be stood down ²⁸¹.

Andrew claimed in her statement that TIE put "pressure" on CEC officials on this issue²⁸², and in her evidence clarified that her conversation with Clark had led her to

²⁷⁶ TIE00663266

²⁷⁷ Rebecca Andrew transcript 52.23-53.3

²⁷⁸ TIE00678245

²⁷⁹ TIE00663266

²⁸⁰ Susan Clark transcript 147.23-148.1

²⁸¹ TIE00633266

²⁸² TRI00000023_0027

speculate that someone within TIE spoke to either McGougan or Holmes²⁸³. However as is noted above, Crosse openly copied McGougan into correspondence with Fraser, and as such Andrew's speculation appears to be misplaced.

Despite concerns being expressed by Fraser and Andrew about the OGC team conducting the review, their superiors were all content:

- Holmes did not agree with Andrew that CEC was unable to perform a monitoring or assurance role, particularly given that he and McGougan sat on the TPB, where the risk register was assessed on a continuous basis²⁸⁴. He considered that the instruction of the OGC team to carry out the risk review was reasonable given the OGC team's experience²⁸⁵.
- McGougan was happy about the review being conducted by the OGC team rather than Turner & Townsend given that the OGC team were a specialist body well practised in such reviews, who had conducted prior gateway reviews at a time when Transport Scotland had been the client²⁸⁶. The OGC team had previously given red and then amber reviews of the project, so there was no suggestion that this was a toothless body that would simply accept what was put to them²⁸⁷.
- Tom Aitchison indicated that the matter was not brought to his attention at the time but that he took comfort from the project going through the OGC reviews

²⁸³ Rebecca Andrew transcript 61.21-62.5

²⁸⁴ Andrew Holmes transcript 21.20-22.4

²⁸⁵ Andrew Holmes transcript 18.24-19.7

²⁸⁶ Donald McGougan transcript 144.3-144.13 (Wednesday 29 November)

²⁸⁷ Donald McGougan transcript 147.4-147.12 (Wednesday 29 November)

and it appeared that TIE were trying to follow national guidelines in requesting this supplementary risk report ²⁸⁸.

Whilst Mike Heath of the OGC team conceded that it was possible that Turner & Townsend could have gone into greater detail in such a review, the time required to do that may have created a further programme risk ²⁸⁹.

In any event Andrew's evidence was that she took comfort from the OGC report which was ultimately produced ²⁹⁰. The OGC team concluded that:

“the tools that are being used to identify, monitor and manage the risks in the project... are impressive. The registers are kept up to date and there is a process for key risks to be highlighted... We recommend that there is continuing high level focus on the management and mitigation of key risks and that the very good work that is being done by the risk manager [Mark Hamill] is effectively used and acted upon” ²⁹¹.

²⁸⁸ Tom Aitchison transcript 80.1-80.7

²⁸⁹ Mike Heath transcript 93.10-93.18

²⁹⁰ Rebecca Andrew transcript 60.2-60.8

²⁹¹ CEC01562064_0007

6B – Optimism Bias

According to the original TIE Risk Manager Mark Bourke, allowance for Optimism Bias (OB) is primarily for the early stages of projects. As projects progress, OB has been shown to reduce, through risk management ²⁹². Stewart McGarrity echoed this, pointing out that the level of OB reduces as the project approaches financial close, as the scheme becomes better defined ²⁹³. Similar points were made by Willie Gallagher ²⁹⁴, Geoff Gilbert ²⁹⁵ and Matthew Crosse ²⁹⁶: the allowance for Optimism Bias came to be replaced by the Quantified Risk Allowance as the project matured, where the risks are understood and analysed more effectively and in more detail than by the ‘simplistic’ inclusion of Optimism Bias ²⁹⁷.

The reduction of OB was broadly in line with guidelines at that time in the Treasury Green Book ²⁹⁸, the STAG guidance ²⁹⁹ and the Mott MacDonald review ³⁰⁰. Professor Flyvberg’s criticisms of these various guidelines is based upon better data being available subsequent to the period in which the Edinburgh tram project evolved ³⁰¹.

²⁹² Mark Bourke transcript 34.10-34.13

²⁹³ TRI00000059_0042 Q43, Stewart McGarrity transcript 8.7-8.15 (Tuesday 12 December)

²⁹⁴ TRI00000037_0062 para 206

²⁹⁵ TRI00000038_0071 para 192

²⁹⁶ TRI00000031_0053 para 157

²⁹⁷ Mark Bourke transcript 39.7-39.15

²⁹⁸ CEC02084256 pages 33-34, 89, TRI00000059_0020 Q14

²⁹⁹ CEC02084489

³⁰⁰ CEC02084689 page 32-33

³⁰¹ Bent Flyvberg transcript 48.5-48.12, 52.1-53.2, 112.3-113.4

In respect of TIE's risk management, Flyvberg noted that:

*“the approach taken to estimates, risk and optimism bias in the Edinburgh tram project was generally similar to the approach of other projects of a similar nature at the time. Equally, the mitigation measures planned and the work to understand risk were similar to those of other projects”*³⁰².

By the time that **Mark Hamill** was appointed as Risk Manager therefore, Optimism Bias no longer formed part of the project cost forecasts, as he was advised by his immediate predecessor³⁰³. This was made explicit in the Final Business Case where it was stated:

*“By the time of the DFBC, OB was effectively eradicated, as per the findings explained in the Mott MacDonald Review of Large Public Procurement in the UK.”*³⁰⁴

³⁰² TRI00000265_0004

³⁰³ TRI00000042_0009 Q19. He had initially sought an explanation for this: TIE00350236

³⁰⁴ CEC01395434_0178 para 11.42

6C – Reductions to the risk allowance

Between the Final Business Case and financial close the risk allowance was reduced in line with the closing out of procurement risks. The Council's IPG report in December 2007 noted that the £49m risk allowance would reduce to £34m due to those risks being closed out ³⁰⁵.

In February 2008 TIE's Finance Director Stewart McGarrity outlined a proposed reduction to be presented to the TPB, from £48.9m at FBC to a lower figure of £30.3m at Close ³⁰⁶. This reduction was matched by an increase in Infraco and Tramco costs ³⁰⁷. The Risk Manager **Mark Hamill** queried this reduction as he did not have sight of the negotiations with Infraco which justified this level of reduction, and in any event identified potential new risks which might need to be catered for:

"Stewart, my main concerns here are that (a) we are reducing the risk allowance while the risk has not actually been transferred or closed and (b) the new risk allocation is not sufficient for the risks which tie will retain. I cannot overstate how anxious I am to ensure that the final QRA truly reflects the actual risk profile at financial close." ³⁰⁸

³⁰⁵ CEC01398245_0092

³⁰⁶ CEC01423172

³⁰⁷ CEC01423173

³⁰⁸ CEC01489953

McGarrity was unhappy with Hamill's expression of these concerns and told him to follow the instructions he was given ³⁰⁹, a sentiment echoed by Geoff Gilbert who was leading on the procurement negotiations ³¹⁰. By mid April 2008 ³¹¹ the anticipated risk allowance at Close had increased again to £32.3m ³¹², which was notified to CEC.

Immediately following Close in May 2008 there was a reconciliation of the risk allowance for the Project Control Budget (PCB), to reflect the last minute price demands by the Infracore and the SDS provider. On 15 May 2008 Graeme Bissett sent round an internal TIE email saying:

"after all the twists and turns of the last fortnight, we need to arrive at a final form settled base cost and risk contingency" ³¹³.

According to Bissett:

"It wouldn't have been doing the Council much use if we'd come up with a different allocation when it was entirely judgmental" ³¹⁴.

In response, McGarrity provided a reconciliation from the last reported estimate of £508m to the PCB of £512m, noting a £1.1m reduction in the allowance to "fund" the SDS increases (Figure 1). He instructed Hamill to "adjust the QRA accordingly" ³¹⁵.

³⁰⁹ Mark Hamill transcript 42.1-42.12. It should be noted that McGarrity considered Hamill "all the way through his employment at TIE to be a consummate professional." Stewart McGarrity transcript 53.13-53.15 (Tuesday 12 December)

³¹⁰ Mark Hamill transcript 43.3-43.8, 43.21-44.13

³¹¹ CEC01245223

³¹² CEC01245225

³¹³ CEC01295328

³¹⁴ Graeme Bissett transcript 165.2-165.4 (Tuesday 31 October)

³¹⁵ CEC01295328, CEC01295329

FIGURE 1: McGarrity spreadsheet

PHASE 1A - BUDGET AT FINANCIAL CLOSE					
	AFC P1	PCB	Deltas	Deltas Analysis	
				Infraco	SDS
FORECAST THIS PERIOD					
TT01	Total Project managem	65,884,280	0		
TT02	Total other resources	6,856,832	0		
TT03	Total design	24,371,614	2,455,905		2,455,905
TT04	Total traffic managem	2,631,262	0		
TT05	Total 3rd party interface	444,843	0		
TT06	Total land and other cor	20,581,175	0		
TT07	Total insurance	4,507,469	0		
TT08	Total MU/DFA / Utilities	48,542,706	0		
TT09	Total Infraco	243,809,301	3,450,000	4,800,000	-1,350,000
TT10	Total Tramco	58,039,910	0		
	Total Base Costs	475,669,391	5,905,905	4,800,000	1,105,905
	Total Risk	32,347,616	-1,905,905	-800,000	-1,105,905
	Total Ph1a	508,017,007	4,000,000	4,000,000	0
Risk Allowance Analysis:					
Infraco/Tramco Delivery	6,872,314	6,872,314	0		
Design & Consents	3,301,992	3,301,992	0		
MU/DFA	8,644,277	8,644,277	0		
General Programme Delay	6,653,659	5,353,659	-1,300,000	-1,300,000	
Land compensation	1,087,563	1,087,563	0		
TRCS	935,765	935,765	0		
Network Rail	318,058	318,058	0		
Other	124,220	124,220	0		
ORA Total	27,937,847	26,637,848	-1,300,000	-1,300,000	0
Non-delivery of VE included in Infraco price	2,000,000	2,000,000	0	-500,000	
Excess of Road Reinstatement	2,000,000	1,500,000	-500,000	-500,000	
Unspecified Risks (Contingency)	409,769	303,864	-105,905	1,000,000	-1,105,905
	32,347,616	30,441,712	-1,905,905	-800,000	-1,105,905
<p>As agreed take full £1.3m out of general delay risk allowance</p> <p>£1.35m = £1m for Construction Support and £350k for Picardy Place design transferred from Infraco budget</p> <p>NB SDS incentive £1m assumed to be funded as required from Risk Allowance No provision for Consents Support (£875k) in the SDS Base Costs - Contingency of £304k available</p>					

Hamill was not at the time aware of the detail of the last minute price increases ³¹⁶ and was accordingly unsure precisely what was being asked of him ³¹⁷. McGarrity's spreadsheet outlined a £1.9m reduction to the risk allowance comprising £800k in Infracore risks and £1.1m in SDS risks. At the same time the Infracore costs had increased by £3.45m and design costs by £2.45m. McGarrity's reconciliation involved a £1.3m reduction in the general delay figure in the QRA plus a £500k reduction in roads reallocation and £100k in contingency ³¹⁸. The net result of McGarrity's reconciliation was to reduce the overall risk allowance to £30.4m, a similar figure as he had proposed in February.

Hamill pointed out to McGarrity that the QRA could not be changed simply by reducing one number ³¹⁹, as the QRA was the product of software run through Monte Carlo simulations that produced a probabilistic average as its output ³²⁰. Changing one number would require the software to be re-run, which would produce marginally different results for the other figures even though the inputs – and the risk profiles themselves – had not changed. To reflect McGarrity's changes, Hamill accordingly required to “hard enter” the new number ³²¹. Hamill again raised the concern that he did not have an explanation for the changes, McGarrity told him that they reflected what had been agreed in the negotiations ³²².

³¹⁶ Mark Hamill transcript 50.21-51.1

³¹⁷ Mark Hamill transcript 51.23-52.1

³¹⁸ CEC01295329

³¹⁹ Mark Hamill transcript 58.14-59.20

³²⁰ TRI00000042_0004 Q7

³²¹ Mark Hamill transcript 59.9-59.20

³²² Mark Hamill transcript 59.21-60.4

Accordingly Hamill produced a spreadsheet as instructed to incorporate the £1.3m reduction to the figure for general delay as outlined by McGarrity. In his covering email Hamill reiterated the point that:

“it is not possible to reduce the value of one risk in QRA without affecting all the others. This is because the P80 allocation is driven by the total mean sum. Therefore, in order to get round this problem I have basically ‘pockled’ the spreadsheet and hard-entered some values” ³²³.

This manual solution was required because the excel spreadsheet would otherwise automatically generate a new set of figures across the whole QRA despite the agreed reduction being attributed only to the figure for general delay ³²⁴. The manual adjustment was not however artificial as it reflected a reduction in the transfer of risk in the contract negotiations ³²⁵.

In the same email Hamill went on to say:

“This solves the problem and helps us get the final result past CEC as I doubt they will notice what I have done. I will revert to normal practise for future QRAs however in this instance I think this is the best way to do it in order to avoid unnecessary scrutiny from our ‘colleagues’ at CEC. Please confirm you are

³²³ CEC01288043

³²⁴ Mark Hamill transcript 61.14-62.10, Steven Bell transcript 19.18-19.21 (Wednesday 25 October)

³²⁵ Mark Hamill transcript 64.19-64.25, Steven Bell transcript 25.12 (Wednesday 25 October)

*content with this approach or otherwise... I will take no response as acceptance.*³²⁶

This was reflective of the mood which Hamill sensed between TIE and CEC at the time, in that he felt some CEC employees would not have been unhappy if the project had not got over the line³²⁷. CEC personnel had also in the past manually entered different numbers on excel spreadsheets which had been shared with them. This had resulted in the formulas within the spreadsheets being “messed up”³²⁸ and resulting in multiple versions circulating with different figures. This led to Hamill asking that CEC be provided with pdfs or hard copies to prevent such disruption³²⁹.

It should be noted that other adjustments to the risk allowance had also been made manually, including the addition of £4.4m of risks over and above the QRA figure³³⁰. These additional risks had been identified by **Steven Bell** and others particularly to cover the risk of non-delivery of Value Engineering savings and for road reinstatement³³¹. Each of these had separately been entered as £2m risks as a matter of judgement (based on work by Quantity Surveyors³³²), without incorporation into the QRA for probabilistic output. It should be noted however that the QRA output is no less dependent on manual inputs, which are themselves equally a matter of judgement³³³.

³²⁶ CEC01288043

³²⁷ Mark Hamill transcript 62.12-63.5

³²⁸ Mark Hamill transcript 67.3-67.19, Steven Bell transcript 27.22-28.4 (Wednesday 25 October)

³²⁹ TIE00351419

³³⁰ CEC01295329

³³¹ Steven Bell transcript 9.13-9.19 (Wednesday 25 October)

³³² Steven Bell transcript 10.20-11.13 (Wednesday 25 October)

³³³ These manual additions to the QRA are also significant as it was erroneously suggested to Graeme Bissett that the risk allowance was being reduced from £32.3m to £26.6m (Bissett transcript 183.22), whereas the actual reduction was from £32.3m to £30.4m – the £26.6m figure related only to the QRA, which was supplemented

CEC was aware that these items were manual adjustments and had no issue with that³³⁴.

The road reinstatement figure was one of those which was reduced in McGarrity's reconciliation above, from £2m to £1.5m. The justification for this lay in the Kingdom Agreement negotiated immediately before financial close³³⁵, where the costs arising in connection with Pricing Assumption 12 were specifically capped at £1.5m³³⁶. This and the other related improvements in the risk profile were outlined in the Close document 'Financial Close Process and Record of Recent Events' which set out how the Kingdom Agreement impacted positively also on the risk provisions for general programme delay, design delay and contamination risk³³⁷. The report set out the recommendation for the £1.3m reduction in the risk allowance which then appeared in McGarrity's subsequent spreadsheet³³⁸.

Accordingly whilst it may never have been made explicit to CEC that the QRA spreadsheet had been manually adjusted rather than re-run, the reduction in the risk allowance was clearly signaled in the Close documents, which made explicit that the £1.3m reduction was a recommendation based on judgement and evaluation³³⁹.

CEC were likewise aware of the manner in which TIE were adjusting the risk allowance to meet increased consortium costs. In mid April 2008, McGarrity sent Alan Coyle and

by the manually added risks as noted above (CEC01295329).

³³⁴ Donald McGougan transcript 23.20-24.1 (Thursday 30 November)

³³⁵ Steven Bell transcript 16.15-16.20 (Wednesday 25 October)

³³⁶ WED00000023 c 7

³³⁷ CEC01338847_0004

³³⁸ CEC01338847_0006

³³⁹ CEC01338847_0006

others in CEC a cost analysis spreadsheet, from which Coyle identified that the £1m increase in Tramco costs had been matched by a similar reduction in the QRA ³⁴⁰.

Coyle's assessment of this to Colin Mackenzie in CEC Legal was:

"The reduction in the QRA was taken from the unspecified risk pot, therefore no science was applied as per the usual QRA mechanism. I guess the reduction from £33m to £32m is no big deal... the OGC gateway review 3 guys had said the previous level of circa £50m would have been in line with industry norm, and given the procurement risks which reduce the figure will be closed at Financial Closed (sic) I guess it makes sense" ³⁴¹.

It was also noted during the Inquiry that the statistical confidence level used to develop the QRA was reduced from P90 to P80 (ie from a 90% confidence level to an 80% confidence level). Whilst McGarrity did not recollect the reason for this reduction, it appears from an email sent to him by Hamill that the reduction was McGarrity's proposal³⁴², and that was Hamill's recollection ³⁴³. P90 was in any event unusual, and according to Hamill most large capital projects would have a P80 and a P50 ³⁴⁴. This is entirely supported by the fact that Turner & Townsend used P80 figures when they took over project management in 2011, similarly stating that P80 was standard for this type

³⁴⁰ CEC01247693_0002

³⁴¹ CEC01247693_0001

³⁴² TIE00351419

³⁴³ Mark Hamill transcript 57.19-57.21

³⁴⁴ Mark Hamill transcript 58.11-58.13

of project ³⁴⁵. P80 and P50 figures were also used by Hamill's predecessor Mark Bourke³⁴⁶.

Professor Flyvberg also noted that:

“the P90 adopted by the project is an unusually high level of confidence; the DfT guidance suggest P80 as the conservative value” ³⁴⁷.

Faithful & Gould also noted that P80 was normal ³⁴⁸.

³⁴⁵ CEC01932700_0020, TRI00000103_0022 Q29

³⁴⁶ TRI00000110_0019

³⁴⁷ TRI00000265_0025

³⁴⁸ CEC01727000 para 5.3.3

6D – Close Report and risk transfer

In March 2008 Andrew Fitchie sent an email to TIE management (including **Steven Bell** and **Susan Clark**) enclosing ‘DLAP version of the Close Report’³⁴⁹. The report included the following paragraph:

*“In broad terms, the principal pillars of the contract suite in terms of programme, cost, scope and risk transfer have not changed materially since the approval of the Final Business Case in October 2007. It is felt that the process of negotiation and quality control has operated effectively to ensure the final contract terms are robust and that where risk allocation has altered this has been adequately reflected in suitable commercial compromises.”*³⁵⁰

The same passage appeared in the final version of the Report on Infraco Contract Suite³⁵¹. Meanwhile in the Close Report, it was stated that:

*“[t]he increase in Base Costs for Infraco is a result of a negotiated position on a large number of items... and substantially achieving the level of risk transfer to the private sector anticipated by the procurement strategy.”*³⁵²

It has been suggested by Inquiry counsel that these statements inaccurately reflect the terms of Schedule Part 4. That Schedule is discussed further in Section 7 below but it should be noted that since this is a DLA approved draft, it supports the contention that

³⁴⁹ CEC01463884

³⁵⁰ CEC01463886_0004

³⁵¹ CEC01338851_0001

³⁵² CEC01338853_0004

Bell and others in TIE management believed - on the basis of legal advice ³⁵³ - that Schedule Part 4 was drafted in such a way as to properly reflect TIE's intention behind the Wiesbaden Agreement and to ensure that Infracore carried the risk for normal design development. It is submitted that Fitchie's claim that he identified the report as inaccurate at the time ³⁵⁴, but did nothing to correct it over these two months ³⁵⁵, is not credible.

It is of note that the Close Report goes on to state that:

"[c]rucially the price includes for normal design development... meaning the evolution of design to construction stage and excluding changes of design principle shape form and outline specification as per the Employer's Requirements." ³⁵⁶

This again reflects the understanding of TIE management as to the effect of Schedule Part 4 standing DLA's advice. It also contains other relevant caveats in line with this understanding:

"tie/CEC will bear any incremental construction programme cost consequences of SDS failure to deliver design outputs in a timely and sufficient manner... TIE will bear the incremental cost and programme consequences associated with a delay in granting consents or approval... and/or the cost and programme

³⁵³ e.g. Willie Gallagher transcript 114.4-114.25

³⁵⁴ Andrew Fitchie transcript 182.8-182.15 (Tuesday 10 October)

³⁵⁵ See for instance DLA letter prior to Close (CEC01033532)

³⁵⁶ CEC01338853_0026

*consequences of changes to design principle shape form and outline specification (as per the ERs) required to obtain the consent or approval.”*³⁵⁷

*“[R]isk allowance does not provide for the costs of significant changes in scope from that defined in the ERs... any such changes falling into these categories would give rise to an increase in the cost estimate.”*³⁵⁸

As will be discussed in Section 7C below, CEC Legal had an opportunity to consider the terms of the contract including Schedule 4 prior to Close but apparently did not do so. Colin Mackenzie understood based on reports from DLA that not all risk had been passed to Infracore and that the risks of mismatch in design and the risk from outstanding approvals were being borne by TIE/CEC³⁵⁹. The Council's 'B Team' accordingly prepared a report for the CEC Directors at the end of April identifying the lack of alignment between the contract and version 31 of the design programme³⁶⁰ and in light of that querying TIE's £3.3m cover for design consents and approvals³⁶¹. CEC Legal had been aware of this issue since at least March 2008, when Graeme Bissett had sent Gill Lindsay a short paper³⁶² outlining *inter alia*:

- “uncertainty” around the alignment of the ERs, the SDS design and the Infracore proposals, which SDS were reviewing;

³⁵⁷ CEC01338853_0027

³⁵⁸ CEC01338853_0028

³⁵⁹ Colin Mackenzie transcript 64.8-64.19

³⁶⁰ CEC01222467_0001, and see Section 7D below

³⁶¹ CEC01222467_0002, and see Section 3B above

³⁶² CEC01474538

- road reinstatement identified as the most significant area of misalignment, for which an additional £2m had been added to the risk allowance ³⁶³;
- delay on post close consents - “this is the one significant change in the risk profile retained by the public sector since December”.

Accordingly the recommendation from Lindsay and others for the Council's Chief Executive to authorise TIE to issue the Notice of Intention to Award the Infraco contract noted that:

“negotiations have required and provided for a 3 month extension to the programme and a range of adjustments to the risk allocations. Many of these adjustments to risk allocation are positive, reflecting the reduced risk contingency. There are some which do pass additional risk to the public sector. Of these, the most important is considered to be SDS. As you are aware, this has been a very difficult point for tie to negotiate and they have provided for the best deal which they advise us is currently available to themselves and the Council. In essence, the contractor BBS will accept the design risk for SDS to a high financial ceiling, whereas the Council and tie must remain financially liable for delay by SDS in relation to the provision by them of information for a range of consents and approvals. Both tie and the Council have worked diligently to examine and reduce this risk in practical terms and tie advises that the new risk contingency contains suitable adjustment for this residual risk.” ³⁶⁴

³⁶³ See Section 6C above

³⁶⁴ CEC02086755

In light of the above it is submitted that TIE discharged its reporting obligations to the CEC Executive in advising of the relevant risk issues, as TIE understood them and supported by TIE's advisors. The extent to which CEC Executive reports to Councillors³⁶⁵ reflected this is a separate issue, not impacting on any member of the SETE group. TIE's reports were made on the understanding that Schedule Part 4 was "competent"³⁶⁶, which ultimately proved not to be the case. As was noted by CEC's Director of Finance, it was only later during the disputes with Infracore that the question of normal design development came to the fore³⁶⁷, an issue addressed further in Sections 7 and 8 below.

³⁶⁵ e.g. CEC00906940

³⁶⁶ Stewart McGarrity transcript 179.1-179.6 (Tuesday 12 December)

³⁶⁷ Donald McGougan transcript 25.24-26.8 (Thursday 30 November)

6E – Consideration of risk register by DPD

In April 2007 **David Mackay** raised a concern at the TPB about the extent of risk reporting and discussion at TPB meetings. Following discussion, the Board agreed to delegate detailed discussion of these issues to the DPD subcommittee³⁶⁸. Whilst the point was never put to Mackay by the Inquiry, it was suggested to Matthew Crosse that this could be viewed as consideration of risk being “demoted”, a suggestion with which Crosse did not agree³⁶⁹, as he considered that the DPD was the appropriate forum for such detailed discussions, with a high level report then being made to the TPB³⁷⁰. The then risk manager Mark Bourke agreed with this, saying that for the subcommittee to have a “deeper consideration” of risk would not necessarily disconnect the Board from understanding of the important issues³⁷¹. The Primary Risk Register was created to present a “top slice” of the critical and “showstopper” risks to the Board³⁷². It should also be noted that the DPD was composed of very senior officials including the SRO and the Project Director plus TIE’s Executive Chairman and Finance Director, amongst others³⁷³.

³⁶⁸ CEC01015822_0008

³⁶⁹ Matthew Crosse transcript 58.22-59.4

³⁷⁰ Matthew Crosse transcript 100.25-101.13

³⁷¹ Mark Bourke transcript 4.18-4.25

³⁷² Mark Bourke transcript 33.10-33.15

³⁷³ TRS00002699_0014

(7) SCHEDULE PART 4

7A – Evolution of Pricing Assumption 1

Steven Bell's involvement in the negotiations surrounding Schedule 4, commencing when he became Project Director in early 2008, was limited both by (a) the terms already agreed at Wiesbaden in December 2007 and (b) the close ownership of negotiations on the TIE side by Geoff Gilbert, assisted by Bob Dawson and from early 2008, Dennis Murray. Frequently Bell was not present at critical meetings nor included in electronic exchanges. An internal audit of the process later instructed by Richard Jeffrey, named "Project Challenge"³⁷⁴ found amongst other things that Bell had little part to play³⁷⁵. It is clear from the chronology of the evolution of Pricing Assumption 1 (PA1) that Bell never led any of the discussions and was only intermittently copied into relevant exchanges.

This chronology is set out in detail in **Appendix 2**.

³⁷⁴ TRI00000102_0203 para 7.386

³⁷⁵ TRI00000102_0204 para 7.393

7B – Legal advice on Schedule 4

Informed by the advice from both the TIE commercial team and by DLA, **Steven Bell's** understanding of PA1 – in common with other parties (see Section 7D) - was that normal design development would be at Infraco's cost.

The evidence of Andrew Fitchie, both orally and in his witness statement ³⁷⁶ was generally to the effect that he advised various persons within TIE, including Bell, of the potential dangers arising from the pricing assumptions in Schedule Part 4. This claim is of doubtful credibility for a number of reasons:

- Nowhere amongst the significant volumes of documentary material is there any evidence of this important advice being provided in writing ³⁷⁷;
- None of the persons at TIE who were allegedly in receipt of this advice recall it being given, including Bell himself ³⁷⁸, **David Mackay** ³⁷⁹, Geoff Gilbert ³⁸⁰, Bob Dawson³⁸¹, Graeme Bissett ³⁸², Willie Gallagher ³⁸³ and Stewart McGarrity ³⁸⁴.
- Fitchie never referred to the fact that he had provided this advice, for instance when McGrigors were later instructed to effectively audit the evolution of

³⁷⁶ TRI00000102_0183 para 7.282 et ff

³⁷⁷ Andrew Fitchie transcript 86.20-86.25 (Tuesday 10 October)

³⁷⁸ Steven Bell transcript 51.3-53.2 (Tuesday 24 October)

³⁷⁹ David Mackay transcript 64.7-64.17

³⁸⁰ Geoff Gilbert transcript 204.15-204.25

³⁸¹ Bob Dawson transcript 44.2-44.16

³⁸² Graeme Bissett transcript 133.25-134.4 (Tuesday 31 October)

³⁸³ Willie Gallagher transcript 114.8-114.25

³⁸⁴ Stewart McGarrity transcript 168.16-168.23 (Tuesday 12 December)

Schedule 4 during Project Challenge in 2010³⁸⁵. Indeed he never indicated to Brandon Nolan that he had warned TIE about the dangers in Schedule 4 and in fact held a different view from Nolan on how the Schedule, and PA1 in particular, operated³⁸⁶.

- This alleged advice is directly in contradiction to the assurances provided by DLA in writing to CEC at the time of contract close – for instance DLA's letter to CEC on 12 May 2008, in which it is stated:

*“No issues have arisen since we last reported which have resulted in any adverse risk alteration to risk balance.”*³⁸⁷

- As indicated in Section 6 above, Fitchie had also approved³⁸⁸ the statements in the Close Report that:

*“In broad terms the principal pillars of the contract suite in terms of programme, cost, scope and risk transfer have not changed materially since the approval of the Final Business Case”*³⁸⁹ and that “[c]rucially the price includes for normal design development.”³⁹⁰

- When disputes arose in 2009 with the contractor over PA1, Fitchie responded to an email exchange with TIE in which he conspicuously failed to make any

³⁸⁵ Andrew Fitchie transcript 168.17-170.7 (Tuesday 10 October)

³⁸⁶ Brandon Nolan transcript 128.14-129.7

³⁸⁷ CEC01033532

³⁸⁸ CEC01463884

³⁸⁹ CEC01463886_0004

³⁹⁰ CEC01463886_0041

comments in line with the alleged advice that he had provided pre-contract³⁹¹.

By contrast, he said in that email:

*“Nowhere is there, in my opinion, is there (sic) wording or a combination of provisions in the Infraco contract that Infraco is not responsible for the production of design or that it can escape the financial consequences of financial inadequacies.”*³⁹²

- In his written statement, Fitchie confirmed that the April 2009 TPB minutes³⁹³ correctly recorded that:

*“DLA Piper were confident of TIE’s position with regard to the principle (sic) areas of contractual disagreement”*³⁹⁴.

This however flies in the face of his claim in oral evidence that he had previously advised TIE of the dangers of Schedule 4.

- The briefing which DLA provided to senior counsel for opinion on these matters in May 2009 indicated that:

*“Instructing solicitors are of the view that the changes in design from BDDI to IFC stages may not, of themselves, give rise to an entitlement on the part of Infraco to additional time and/or payment”*³⁹⁵

³⁹¹ Andrew Fitchie transcript 173.17-174.9 (Tuesday 10 October)

³⁹² CEC00851679

³⁹³ CEC00633071_0006

³⁹⁴ TRI00000102_0249 para 8.33; see also Andrew Fitchie transcript 43.1-43.22 (Tuesday 10 October).

³⁹⁵ CEC00962477_0008

and

“inclusion of the drafting phrase ‘normal design development’... should logically be construed to imply that not every change in design from BDDI to IFC will be sufficient to trigger the ND mechanism” ³⁹⁶.

- The same briefing also indicated that:

“Instructing solicitors consider that refinement of a design, rather than an alteration to an essential element will, in most cases, be insufficient to be deemed abnormal development.” ³⁹⁷

Fitchie could not explain this contradiction of his stated position ³⁹⁸.

- Senior counsel’s subsequent Opinion ³⁹⁹ in June 2009 indicated that not every change from BDDI to IFC would constitute a Notified Departure, and what constitutes normal design development is a matter of professional opinion and judgement. It is reasonably clear that this advice led to TIE’s strategy of pursuing BDDI-IFC arguments at DRP, yet again Fitchie was unable to provide an explanation for this contradiction of his stated position ⁴⁰⁰.

Indeed in his written statement Fitchie pointed out that this Opinion:

³⁹⁶ CEC00962477_0010

³⁹⁷ *ibid*

³⁹⁸ Andrew Fitchie transcript 52.12-53.3 (Wednesday 11 October)

³⁹⁹ CEC00901460. This contains a watermark in Nick Smith’s name indicating that it was in the possession of CEC Legal.

⁴⁰⁰ Andrew Fitchie transcript 56.12-58.20 (Wednesday 11 October)

“did not differ materially from DLA Piper’s advice” ⁴⁰¹.

- In November 2009, DLA provided advice to TIE that the adjudication decisions on Gogarburn and Carrick Knowe - which supported Infraco’s position on PA1 – were erroneous and should be challenged ⁴⁰².
- In oral evidence, Fitchie did not appear to appreciate the genesis of the problems with PA1, particularly in the redraft on 19 March 2008, which rendered normal design development redundant on a literal reading ⁴⁰³. Fitchie thought there was nothing significant about this redraft ⁴⁰⁴. Similarly, his email at the time raised other issues with the draft but nothing about PA1 ⁴⁰⁵.
- Fitchie’s claim is at odds with his concurrent (and equally implausible) claim that he did not provide advice on Schedule 4 since he was not involved in its negotiation – contradicted by each of the individuals at TIE who relied on his advice and by DLA being assigned as legal Quality Assurance for Schedule 4 ⁴⁰⁶.

It is also crucial to note that whilst Transport Scotland obtained legal advice from Dundas & Wilson on the Infraco contract in June 2009, to be told that the contract was

⁴⁰¹ TRI00000102_0250 para 8.36

⁴⁰² DLA00001382

⁴⁰³ See Appendix 2 and figure 6

⁴⁰⁴ Andrew Fitchie transcript 135.23-136.2 (Tuesday 10 October)

⁴⁰⁵ CEC01489543

⁴⁰⁶ CEC01399321

“not fit for purpose”⁴⁰⁷, TS apparently did not share this advice with either TIE or CEC.

Dundas & Wilson further noted that the Infracore contract was in such a form as:

“may tend to encourage disputes... the provisions relating to Change and the strict time limit encourage notification of changes which if not accepted may create a hostile atmosphere and divert management from the important task of delivery.”⁴⁰⁸

Coming as it did immediately prior to the period in which TIE engaged in a number of DRPs under the contract, it is reasonable to assume that this advice, contradicting the advice received from DLA as the contract’s authors, may have had a significant impact on TIE/CEC strategy, had it been made available. The first time TIE actually received legal advice to the effect that PA1 might not support the arguments which had been fostered by DLA came following the initial adverse adjudication decisions. This is covered in Section 8 below.

⁴⁰⁷ TRI00000065_0041

⁴⁰⁸ TRS00031282

7C – Actions and understanding of CEC Legal

The position of Andrew Fitchie discussed above is of particular importance given that CEC did not obtain independent legal advice on the contract. This decision was taken by Gill Lindsay (contrary to recommendations from her staff ⁴⁰⁹) on the basis that she was content with the assurances which were provided by DLA ⁴¹⁰ and that separate advice for CEC would have been unnecessary and caused delay ⁴¹¹.

Lindsay's evidence was that her staff did not have particular concerns warranting such a review, they just did not want to be personally blamed for something going wrong ⁴¹². Lindsay instructed Nick Smith to carry out a review of Schedule Part 4 in August 2007⁴¹³, which he refused to do because of time constraints ⁴¹⁴ despite his continuing involvement up until contract close nine months later. This refusal does not appear to have been communicated to Lindsay either by Smith or his line manager Colin Mackenzie ⁴¹⁵ and was in spite of her continuing instructions for them to focus on the tram project and interface with DLA ⁴¹⁶, from which she saw no product from them beyond a single sheet of paper ⁴¹⁷.

⁴⁰⁹ Nick Smith transcript 152.11-152.15 (Wednesday 13 September), CEC00013273_0001

⁴¹⁰ CEC01031217

⁴¹¹ Gill Lindsay transcript 13.23-14.13. Donald McGougan agreed – Donald McGougan transcript 138.13-139.8 (Wednesday 29 November)

⁴¹² Gill Lindsay transcript 29.11-29.20

⁴¹³ CEC01567527

⁴¹⁴ CEC01564795

⁴¹⁵ Gill Lindsay transcript 50.16-50.22, 52.23-53.10

⁴¹⁶ CEC01400439, Gill Lindsay transcript 72.12-74.9

⁴¹⁷ Gill Lindsay transcript 51.3-51.16

Smith claimed that he did not even read the draft Schedule Part 4 provided to him by TIE in mid April 2008 ⁴¹⁸, despite conceding that the problems with the drafting would have been apparent to him had he read it at that time ⁴¹⁹. Lindsay did not read that draft of Schedule Part 4 either ⁴²⁰. By contrast, Mackenzie confirmed that he had read Schedule Part 4 prior to the end of April 2008 ⁴²¹, and was surprised to hear that Smith claimed not to have read it ⁴²².

⁴¹⁸ CEC01245223

⁴¹⁹ Nick Smith transcript 3.12-3.16, 17.15-19.4 (Thursday 14 September)

⁴²⁰ Gill Lindsay transcript 133.21-134.9

⁴²¹ Colin Mackenzie transcript 154-7-154.9

⁴²² Colin Mackenzie transcript 157.9-157.13

7D – Normal design development

Steven Bell's evidence was that he understood that the effect of Schedule 4, and of PA1 in particular, was that the contractor would bear the risk of normal design development ⁴²³. This is in line with the understanding of Geoff Gilbert who was the principal negotiator on the TIE side ⁴²⁴ and which was supported by DLA as evidenced by their representations to CEC on the transfer of risk, notwithstanding the position now adopted by Andrew Fitchie in his evidence ⁴²⁵.

Even in areas where the design was at an early stage, it did not automatically follow that development of that element of the design would fall beyond normal design development, since SDS required to achieve the Employers Requirements (ERs), which Infracore likewise had an obligation to build ⁴²⁶. In specific areas where design was lacking e.g. Burnside Road or Picardy Place, provisional sums were set aside ⁴²⁷.

Whilst Bell was not present at Wiesbaden, he saw a copy of the Wiesbaden Agreement shortly after it had been signed ⁴²⁸. His reflection at the time that it was clearly intended to ensure that normal completion of designs was contractor's responsibility; if it was beyond that then it was a client change. He read this to mean that significant changes would be beyond normal design development. The contract set out the ERs and he would accordingly expect the contractor to achieve those Requirements. He did not

⁴²³ Steven Bell transcript 30.6-30.10 (Tuesday 24 November)

⁴²⁴ TRI00000038_0112, para 283

⁴²⁵ See Section 7B above

⁴²⁶ Steven Bell transcript 62.8-62.22 (Wednesday 25 November), see also CEC00034842_0012 para 46 for Infracore's acceptance of this

⁴²⁷ Steven Bell transcript 111.9 (Tuesday 24 October), Stewart McGarrity transcript 118.20-119.16

⁴²⁸ Steven Bell transcript 27.3-27.10 (Tuesday 24 October)

expect very small dimensional changes to equate to something that was beyond normal design development ⁴²⁹.

Further, Bell read the revised Infracore civil proposals in February 2008 as being entirely in accordance with the obligations he understood them to have undertaken. Throughout the proposals the following phrase appears:

“Design to be completed and all consents and approvals obtained.” ⁴³⁰

This showed that Bilfinger were affirming in their proposals that they would complete the design, which Bell took as a positive affirmation of their obligations ⁴³¹.

Bell’s evidence as to his understanding and belief is entirely in accordance with his statements and actions at the time. In an internal email from Bell to the senior TIE team in mid April 2008 he stated that:

“the logic behind the November ‘freeze’ allows for all normal design development at no extra cost” ⁴³².

It is also noted that this same understanding was shared by his deputy **Susan Clark** - she answered the same question by saying:

“BBS are contractually obliged to construct to the designs that SDS produce and get consented. We have been identifying significant changes as design has progressed to ensure that we have made financial provision — eg Burnside

⁴²⁹ Steven Bell transcript 30.6-32.2 (Tuesday 24 October)

⁴³⁰ CEC01450027

⁴³¹ Steven Bell transcript 82.15-83.21 (Tuesday 24 October)

⁴³² CEC01297322

Road. Normal design development is a BBS risk as described in Schedule 4 of the Infraco contract”⁴³³.

It is also of note that if a literal reading of PA1 is preferred, rendering the concept of normal design development redundant, then Pricing Assumption 9 would also be redundant, since it refers back to the same concept of normal design development as defined in PA1⁴³⁴. Moreover, if normal design development is redundant such that the Infraco was only obliged to build in accordance with the BDDI, then Pricing Assumptions 13 and 19 would also both be entirely redundant, as they each specify particular works and structures in which the Infraco is only obliged to build to the BDDI⁴³⁵.

Furthermore, Bell’s understanding of the commercial intent behind PA1 is supported by the evidence of the various witnesses for the contractor, all of whom envisaged that the provision for normal design development in the clause would cover minor changes. This commercial intent was not borne out by interpretation of the clause in subsequent adjudications, where for example in the adjudication on Carrick Knowe, pigeon proofing (which was required under the ERs but did not feature in the BDDI) was held to constitute a Notified Departure⁴³⁶. Infraco did subsequently make concessions about minor changes⁴³⁷.

⁴³³ CEC01355447

⁴³⁴ USB00000032_0006

⁴³⁵ USB00000032_0007

⁴³⁶ CEC00479383_0024 para 7.71; Steven Bell transcript 81.18 (Wednesday 25 October)

⁴³⁷ Brandon Nolan transcript 165.12-165.22

Scott McFadzen commented on a paper connected to the Rutland Square Agreement in which it is stated that:

*“The design information which provided the basis for BBS’s price will be a pricing assumption under Schedule 4. The risk of design ‘creep’ accordingly lies with TIE.”*⁴³⁸

McFadzen said that design creep was not the same as completion of incomplete design⁴³⁹ – indeed design creep is what TIE sought to guard against in response to Duncan Fraser’s proposed risk premium for changes⁴⁴⁰. Gilbert similarly indicated that the wording of PA1 was intended to protect BBS from ‘scope creep’⁴⁴¹. The document further notes:

“Infraco will take the risk in relation to design quality... TIE will hols (sic) the Infraco harmelss (sic) under the Infraco contract in respect of time and costs incurred as a result of the late delivery of the design by SDS which exceeded the liquidated damages recoverable from SDS under the SDS contract. Recovery of liquidated damages will be an Infraco risk.”

McFadzen in his evidence explained his understanding of the provision for normal design development in PA1 by reference to the fact that the contractor was trying to limit design risk to normal design and build risk, so that normal design development would

⁴³⁸ CEC01284179_0027

⁴³⁹ Scott McFadzen transcript 95.15-96.11

⁴⁴⁰ See Section 3B above

⁴⁴¹ Geoff Gilbert transcript 111.3-111.20

cover for example a minor increase in section depth ⁴⁴². The purpose of the clause was to try to guard against for example a bridge being made wider to accommodate a footway⁴⁴³. Whilst the definition of normal design development excluded shape and form, it included increase in section size and increases in reinforcement, which were considered to be the normal risks a contractor would expect to take in a design and build contract ⁴⁴⁴. McFadzen considered that the wording was clear in order to achieve this ⁴⁴⁵.

Richard Walker gave an example of normal design development as a drip channel on the side of a concrete soffit moving a few inches, but changes of shape or profile would fall outwith the definition ⁴⁴⁶.

According to Jochen Keysberg, normal design development as far as Bilfinger was concerned would include for example getting three more steel bars in a concrete foundation, but not changing the whole shape or type of construction. It was the borderline of normal development which was subject of “many debates” ⁴⁴⁷. If the construction methodology changed, or if quantities changed “dramatically”, that was not normal design development, but there was:

⁴⁴² Scott McFadzen transcript 87.7-87.14

⁴⁴³ Scott McFadzen transcript 87.15-87.19

⁴⁴⁴ Scott McFadzen transcript 88.13-88.17

⁴⁴⁵ Scott McFadzen transcript 88.18-88.24

⁴⁴⁶ Richard Walker transcript 73.16-74.1

⁴⁴⁷ Jochen Keysberg transcript 27.13-27.19

“certainly somewhere a grey area between what is design development and what is a change” ⁴⁴⁸.

For Pinsent Masons, Ian Laing’s evidence was that he recalled asking technical people within Bilfinger what normal design development meant and not getting a consistent answer ⁴⁴⁹. He considered that normal design development was a matter for technical experts, as there may be ways in which the design changed which were not changes of principle, shape, form or specification ⁴⁵⁰. Despite the wording, Laing considered that there remained the possibility for development of design that was not a change to design principle &c and thus not “caught” by PA1 ⁴⁵¹.

For Siemens, Michael Flynn explained normal design development by reference to what it would not include: if there was a fundamental shift in design because it would not work then the original costing may no longer be appropriate ⁴⁵². Looked at as a whole, PA1 provided that for those items which had already been designed, there should be no redesign ⁴⁵³. Flynn was also directed to the minutes of a BBS meeting on 5 June 2008, shortly after contract close in which it is noted:

“Everyone to read 1st part of Sch 4 to understand BBS strategy towards design changes. The difference in the design programme version 26 and the in Schedule Part 4 already mentioned version 31 (sic) has already been notified to tie... a dedicated change team is being built... 24 changes have been notified.”

⁴⁴⁸ Jochen Keysberg transcript 28.3-28.7

⁴⁴⁹ Ian Laing transcript 23.10-23.16

⁴⁵⁰ Ian Laing transcript 26.15-26.21, 35.5-35.12

⁴⁵¹ Ian Laing transcript 35.17-36.13. See also Section 8D below.

⁴⁵² Michael Flynn transcript 49.22-50.6

⁴⁵³ Michael Flynn transcript 50.14-51.3

Notwithstanding all of this, the minutes go on to note:

*“For legal clarity TIE’s acknowledgement of base case assumptions and expected changes of these has been embedded into Schedule Part 4. **However, normal design development remains BBS risk.**”*⁴⁵⁴

It is accordingly submitted that, notwithstanding the problems now identified with the wording, the understanding of those on both sides of the contractual negotiations, at the time of execution, was that the contractor was responsible for the costs associated with normal design development, which was understood to cover minor changes to existing design. For Bell (and for TIE), the costs for any anticipated changes beyond that were anticipated to be provided for within the risk allowance.

⁴⁵⁴ SIE00000228 pages 4-5 (emphasis added)

7E – Other Pricing Assumptions

A number of the other Pricing Assumptions were discussed in the course of **Steven Bell's** evidence ⁴⁵⁵. There were 43 pricing assumptions in total. Bell accepted that Pricing Assumption 2, that the SDS design was aligned with the Infraco programme, was not correct ⁴⁵⁶. In parallel to this, Pricing Assumption 4, that the Schedule 15 programme was the same as the design delivery programme in the SDS agreement, was also incorrect as SDS were 13 months behind schedule ⁴⁵⁷. This led to the first Notified Departure and is dealt with in Section 7F below.

Bell believed that Pricing Assumption 3 was correct (that the SDS deliverables complied with the Infraco proposals and the ERs), and that despite workshops being held after close to align certain items, there were no fundamental misalignments ⁴⁵⁸.

Regarding Pricing Assumption 11, that Infraco shall not encounter any below ground obstructions of voids, Scott McFadzen for Bilfinger highlighted this Pricing Assumption as one which was known not to be true at the time of contract close ⁴⁵⁹, and which was more significant than the alignment of the design programme ⁴⁶⁰. Bell indicated that provision was made for this in the risk allowance ⁴⁶¹.

⁴⁵⁵ These are found in Schedule 4 (USB00000032) at pages 6-9

⁴⁵⁶ Steven Bell transcript 146.22-147.3 (Tuesday 24 October); see Section 7F below

⁴⁵⁷ Steven Bell transcript 148.8-148.17; see also TRI00000112_0039 Q64

⁴⁵⁸ Steven Bell transcript 147.4-148.7. Cf Ian Laing's evidence (see Section 7F below).

⁴⁵⁹ Scott McFadzen transcript 144.13-145.1. Note that McFadzen erroneously recalled this as being PA12 (transcript 150.14-150.17)

⁴⁶⁰ Scott McFadzen transcript 165.6-165.16

⁴⁶¹ Steven Bell transcript 150.21-151.3

A separate risk provision was made for roads reconstruction ⁴⁶² in respect of Pricing Assumption 12, following discussion between Bell and McGarrity ⁴⁶³. Bell had ultimately preferred the Infracore trackform proposal to the SDS recommendation after the parties had worked together to a technical conclusion. The concerns about voiding turned out not to be as significant as SDS had feared, and this was a separate issue from the problem in Princes Street, which was about the interface between the road surfacing and the head of the rails ⁴⁶⁴.

Pricing Assumption 24 was that the MUDFA works would be completed in accordance with the requirement of the Infracore programme; Bell considered at the time that there was a medium level risk that this would not be achieved ⁴⁶⁵. MUDFA formed the largest single item in the risk allowance ⁴⁶⁶. Graeme Bissett did not agree with the proposition that it would have been clear at contract close that the MUDFA works would not be complete in time, and recalled that the revised MUDFA programme was being adhered to ⁴⁶⁷.

Pricing Assumptions 9, 13 and 19 have been dealt with in Section 7C above. No issues have been identified or raised with witnesses in respect of the remaining 33 Pricing Assumptions, which accordingly are assumed to have been considered to be correct at the time of contract close.

⁴⁶² TIE00126755

⁴⁶³ Steven Bell transcript 95.9-95.14, 99.19-100.1, 111.18-113.18 (Tuesday 24 October)

⁴⁶⁴ Steven Bell transcript 154.18-155.1

⁴⁶⁵ Steven Bell transcript 156.10-156.22, see also TRI00000112_0039 Q64

⁴⁶⁶ TIE00126755

⁴⁶⁷ Graeme Bissett transcript 156.22-157.21 (Tuesday 31 October)

7F – Misalignment and Notified Departures

On 26 March 2008 Ian Laing emailed **Steven Bell** and others regarding the possibility of an immediate Notified Departure (ND)⁴⁶⁸ based on the update of the design programme from v26 to v28, which would be a departure from Pricing Assumption 4. In evidence Laing indicated that this was only a possible ND because in order for the contractor to notify that there has been an ND, there had to be a financial impact, which required analysis of the new version of the design programme⁴⁶⁹.

This was likewise recognised by Jim McEwan's reaction to this email which he sent to Andrew Fitchie (copying in Bell):

*“only where the change can be shown to materially change the Infracore programme critical path should we be liable for potential additional charges”.*⁴⁷⁰

Bell reiterated this point in his evidence – for Infracore to be entitled to additional money, it had to show that there was a time or cost implication to the change⁴⁷¹.

Following this on 2 April 2008, Laing altered clause 3.2 of Schedule 4 to acknowledge that certain of the Pricing Assumptions were based on facts which were known to be incorrect⁴⁷². He did this specifically because he had not received a response from TIE in relation to the potential ND to which he had alluded⁴⁷³. The only other Pricing Assumption which Laing identified as presenting a risk of an ND arising was Pricing

⁴⁶⁸ CEC01465933

⁴⁶⁹ Ian Laing transcript 40.1-40.12

⁴⁷⁰ CEC01465933

⁴⁷¹ Steven Bell transcript 88.6-88.23 (Tuesday 24 October)

⁴⁷² CEC01423747

⁴⁷³ Ian Laing transcript 45.1-45.6

Assumption 3, namely that the SDS design complied with the ERs ⁴⁷⁴. Laing did not anticipate that the ND mechanism would lead to the large number of claims which eventuated ⁴⁷⁵. Nor did he hear anyone saying to TIE what the contractor thought that the associated additional costs were likely to be ⁴⁷⁶.

Fitchie's advice to TIE was to negotiate with BBS on the programme update prior to contract close as:

“the Notified Departure mechanism is too blunt and will permit BBS to include everything that they estimate is going to affect them to be priced and to be granted relief. That Estimate is bound to be all encompassing and conservative”.

Fitchie suggested that TIE required:

“to capture as many identified key changes that tie knows will be required and to attempt to fix them and agree their likely programme and/or cost impact with BBS prior to contract award, or at the least identify the reasonable range of programme and cost impacts.” ⁴⁷⁷

McEwan's position was that Fitchie's proposal was pragmatically impossible: if TIE could have captured and fixed all the changes then the issue would not have arisen in

⁴⁷⁴ USB00000032_0006, Ian Laing transcript 40.22-41.14. Like Bell, he acknowledged the work of the alignment workshops to resolve this issue – see Section 7E above.

⁴⁷⁵ Ian Laing transcript 46.5-46.9

⁴⁷⁶ Ian Laing transcript 50.6-50.8

⁴⁷⁷ CEC01465933

the first place ⁴⁷⁸. His view was rather that TIE had to get SDS and Infracore aligned through novation ⁴⁷⁹.

By contrast, Geoff Gilbert proposed that TIE needed to:

“a) confirm the agreements made with SDS on how the differences between v26 and v28 will be dealt with e.g. where and how they have agreed to pull back those dates. b) identify the impact of these mitigations and any unmitigated changes from V26 on the BBS critical path. This presumably shows that their critical path is unaffected. Then agree this position with BBS. c) include the agreed SDS mitigations in the Programme Schedule” ⁴⁸⁰.

Bell confirmed that TIE’s response was in effect a combination of the two approaches suggested by McEwan and Gilbert, by both seeking to be satisfied that there was adequate provision in the risk allowance or Provisional Sums, and by seeking to reduce impacts and minimising the circumstances which could lead to NDs ⁴⁸¹.

Ultimately the design programme was updated from v26 to v31 at close, rather than v28 as anticipated by Laing’s email. TIE’s approach to the issue is partly illustrated by a schedule circulated by **Tom Hickman** on 5 May 2008 ⁴⁸² in which the design programme change from v26 to v31 was broken into constituent parts and analysed for potential programme impact: 15 of the 78 elements of the programme were considered to have an impact or potential impact, whilst the remaining 63 would have no impact –

⁴⁷⁸ James McEwan transcript 184.2-184.9

⁴⁷⁹ James McEwan transcript 184.9-184.12, CEC01465908

⁴⁸⁰ CEC01465933

⁴⁸¹ Steven Bell transcript 104.18-105.6 (Tuesday 24 October)

⁴⁸² CEC01294479

as some were forecasting an improved date ⁴⁸³ and others were not on critical path and retained substantial float before Infracore were due to build ⁴⁸⁴. Whilst the programme change would give rise to an ND, it would only result in additional money or time if such were due ⁴⁸⁵.

It appears from a BSC report that there was an agreed mitigated impact from the v26-v31 slippage of 38 days ⁴⁸⁶. It is unclear from the information available how exactly this 38 days impact led to a BSC claim for an additional £6.5m ⁴⁸⁷ under INTC1 ⁴⁸⁸.

Bell accepted that Fitchie's advice, whilst focused on this particular Notified Departure, was equally applicable to other potential NDs ⁴⁸⁹. Accordingly he and Dennis Murray went through the 'backup' documentation to Schedule 4 in order to assess and quantify estimates ⁴⁹⁰, and wherever there was a known area where an ND was likely (for instance roads reconstruction or MUDFA works), they attempted to crystallise the issue and either make provision in the risk allowance or sought to minimise the impact through mitigating actions ⁴⁹¹.

Bell did not however expect "wholesale" design development changes as ultimately became a significant matter of dispute ⁴⁹². He expected that there would be some items

⁴⁸³ TRI00000255

⁴⁸⁴ TRI00000257

⁴⁸⁵ *ibid*

⁴⁸⁶ CEC01169379_0003

⁴⁸⁷ CEC00951737_0002

⁴⁸⁸ The sum ultimately agreed was £3.5m - BFB00003297_0069. It therefore appears that Fitchie was correct to predict that Infracore's estimate would be "all encompassing and conservative".

⁴⁸⁹ Steven Bell transcript 91.6-91.16 (Tuesday 24 October)

⁴⁹⁰ Steven Bell transcript 92.15-92.23

⁴⁹¹ Steven Bell transcript 99.10-99.15 and see Section 6C above

⁴⁹² Steven Bell transcript 95.15-95.17

that would be beyond normal design development, from which Infracore should rightly be protected, e.g. third party requirements by CEC or Forth Ports, which in some circumstances may have been paid by the third party⁴⁹³. Other elements were driven by ground condition uncertainty, where likely there were likely to be changes⁴⁹⁴. Most of the structures had a “reasonable degree of development” but around e.g. Murrayfield there was less design at November 2007 and may have been higher risk of something being beyond normal design development⁴⁹⁵. There was an allowance of £3.3m for design items beyond normal design development and additional areas where separate allowance had been made under Provisional Sums⁴⁹⁶.

Bell accordingly expected potentially “dozens” of NDs over the course of the project, which would be covered by the relevant provisions in the risk allowance, but did not expect the many hundreds of INTCs which eventuated⁴⁹⁷. By comparison, Joachim Enenkel of Bilfinger anticipated “a few” NDs, but not the number that ultimately occurred⁴⁹⁸. By contrast, Scott McFadzen claimed that in discussions with Bell and others it was known that there would be “a lot” of NDs but not how many or what their value would be⁴⁹⁹.

Nick Smith gave evidence that he had no knowledge of the concept of NDs prior to contract close⁵⁰⁰. However this stood in contrast with the documentation which he

⁴⁹³ Steven Bell transcript 96.12-97.5

⁴⁹⁴ Steven Bell transcript 97.6-97.12

⁴⁹⁵ Steven Bell transcript 97.13-97.24

⁴⁹⁶ TIE00126755

⁴⁹⁷ TRI00000109_0059 Q45(2)

⁴⁹⁸ Joachim Enenkel transcript 134.20-135.11

⁴⁹⁹ TRI00000058_0050 para 173

⁵⁰⁰ Nick Smith transcript 150.4-150.9 (Thursday 14 September)

received prior to close ⁵⁰¹, to which his only response was that he did not always read the emails he received ⁵⁰².

Gill Lindsay did not recall if she thought at the time there was a risk of more than one ND and said she was only aware of the one which was highlighted in a letter from DLA⁵⁰³, relating to the update of the design programme ⁵⁰⁴. She accepted however that the advice letter she received from DLA ⁵⁰⁵ on 28 April 2008 discussed NDs, pricing assumptions and changes all in the plural ⁵⁰⁶.

Donald McGougan understood that there would be an immediate ND based on the SDS delays impacting the Infracore programme, and that TIE had quantified this in their risk allowance ⁵⁰⁷. He acknowledged that he did not however include this in his report to Council ⁵⁰⁸ on 1 May 2008 and conceded that it perhaps should have been ⁵⁰⁹.

Colin Mackenzie was likewise aware that there was likely to be an ND shortly after execution ⁵¹⁰. He acknowledged that, standing his alleged concerns about the risk pot being “on the low side” ⁵¹¹, he should have sought clarification on the likely number and value of NDs ⁵¹²:

⁵⁰¹ CEC01312358 and attachments

⁵⁰² Nick Smith transcript 150.21-151.13

⁵⁰³ CEC01312368

⁵⁰⁴ Gill Lindsay transcript 146.19-146.23

⁵⁰⁵ CEC01312368

⁵⁰⁶ Gill Lindsay transcript 148.23-149.6

⁵⁰⁷ Donald McGougan transcript 33.6-33.19 (Thursday 30 November)

⁵⁰⁸ CEC00906940

⁵⁰⁹ Donald McGougan transcript 33.20-34.2 (Thursday 30 November)

⁵¹⁰ Colin Mackenzie transcript 96.13-96.15

⁵¹¹ Colin Mackenzie transcript 93.14-93.18

⁵¹² Colin Mackenzie transcript 97.9-97.12

(8) DISPUTES

8A – Contractor behaviour

The repeated price increases by the contractor between preferred bidder stage and contract close have been addressed in Section 2. Infraco's management of SDS post-contract is covered in Section 3. Over and above this, there are various aspects of the contractor's behaviour post financial close which informed TIE's commercial and contractual strategy.

Infraco failed to mobilise or sign up subcontractors quickly or effectively, despite a £45m mobilisation payment ⁵¹³. This was conceded by Scott McFadzen ⁵¹⁴ who attempted to excuse the fault by saying that it was a complicated contract to subcontract ⁵¹⁵ and that Bilfinger were "new on the block" in the Scottish construction industry ⁵¹⁶. It appears however to have been suggested by Colin Brady of Bilfinger that there were instructions not to mobilise and instead to build claims based on design and delay ⁵¹⁷. This was confirmed by TIE's observations on the ground: whilst Infraco's technical and construction teams on site were built up gradually, the commercial team of 30 claims staff came onsite immediately ⁵¹⁸. This is also entirely in line with Richard Walker's strategy as noted by Steve Reynolds prior to contract close:

⁵¹³ TRI00000109_0083 Q65(1), TRI00000112_0046 Q76(1), Mike Heath transcript 110.9-110.22, Dave Anderson transcript 181.17-181.22

⁵¹⁴ TRI00000058_0053 para 185

⁵¹⁵ Scott McFadzen transcript 169.7-169.20

⁵¹⁶ Scott McFadzen transcript 170.7-170.16

⁵¹⁷ TRI00000102_0247 para 8.21

⁵¹⁸ TRI00000085_0089 para 207, TRI00000108_0095 Q124, SIE00000228_0004 (see quote on page 82 above).

*“Walker has mused that if TIE understood the likely true cost of building the scheme then it would be cancelled... This is Richard’s view of the strategy he has adopted to retain as much flexibility pre-contract with a view to securing substantial variations post-contract.”*⁵¹⁹

Accordingly there was never a partnership ethos⁵²⁰.

Moreover, Infraco frustrated the change process by delaying in producing estimates. When estimates were produced, they were excessive: by 2011 the average agreed value was just over half (52%) of what Infraco had originally estimated⁵²¹, amounting to a reduction of £22.5m⁵²². This practice of habitually over-billing was undoubtedly a significant factor in drawing out disputes over changes which might otherwise be agreed in principle⁵²³, particularly where Infraco refused to carry out any work pending resolution⁵²⁴. The failure to provide estimates in time effectively frustrated the programme⁵²⁵. This is well exemplified by TIE’s letter to BSC in February 2010 highlighting that of 518 change notices which had been submitted by Infraco as at that time, only 47 estimates had been provided within the time set down in the contract, and 304 had not been submitted at all⁵²⁶.

Bilfinger further overloaded the change process by submitting numerous changes for relatively small sums. From Bilfinger’s own schedule, it is apparent that 140 INTCs

⁵¹⁹ PBH00035854_0003 c2.1.1

⁵²⁰ Damian Sharp transcript 193.13-194.3

⁵²¹ TRI00000109_0079 Q61

⁵²² TIE00086026_0011

⁵²³ TRI00000141_0006

⁵²⁴ Damian Sharp transcript 192.20-192.22

⁵²⁵ Dave Anderson transcript 146.15-146.17

⁵²⁶ CEC00574090

submitted by Infraco were for single digit thousands of pounds, and 34 for less than £1000, the lowest claim being for a mere £45. By the time of mediation in March 2011, 296 INTCs still had no estimate, despite the INTCs in question having been issued as early as May 2008⁵²⁷. There appeared to be disquiet at this tactical approach on the part of Bilfinger's partners, Siemens noting that the huge number of changes made the process unmanageable⁵²⁸:

“Siemens wanted Bilfinger Berger to proceed with small value changes ‘at risk’ in order to mitigate delay and/or enable progress Off-Street sections of the works.”⁵²⁹

Whilst obstructions such as MUDFA undoubtedly impacted on certain on street sections, Infraco refused even to work off-street where they were unobstructed⁵³⁰ and refused to consider mitigating actions⁵³¹. Whilst Infraco considered that the re-sequencing proposed by TIE to mitigate delay actually amounted to acceleration for which they were entitled additional costs⁵³², the post-mediation report by Turner & Townsend likewise noted that Bilfinger had not acted to mitigate the impact of any delays⁵³³.

Jim Donaldson of Bilfinger noted that Infraco originally worked on the job in a cooperative manner, but from 2009 there was a change “from on high” to work to the

⁵²⁷ BFB00003297 – See change register pages 69-91. The £45 claim is INTC 384 on page 83.

⁵²⁸ SIE00000190

⁵²⁹ TRI00000171_0044 para 90

⁵³⁰ David Mackay transcript 91.8-91.15, Dave Anderson transcript 181.17-182.3 and see Section 4B above

⁵³¹ Steven Bell transcript 29.22-30.5 (Wednesday 25 October)

⁵³² Martin Foerder transcript 83.19-84.9

⁵³³ WED00000103_0045

strict terms of the contract⁵³⁴. There is a tension between Infraco's claim to have been strictly observing the change provisions in the contract whilst at the same time flaunting those provisions by submitting late estimates or no estimates at all.

This strategy by the civils contractor is exemplified by Keysberg's declaration to **Richard Jeffrey** that:

*"this contract allows us to hold you to ransom"*⁵³⁵.

Infraco's later suggestion that they had only priced for "a three wheeled car"⁵³⁶ does not sit well with their public reports that they had undertaken the tram project as a "turnkey" contract⁵³⁷. The strategy appears to have been influenced by the economic downturn in 2008 with the significant consequent impact on the construction industry and Bilfinger's decision to take a stricter line with the risk management in their civils business following a series of difficulties in Norway, Doha, Cologne and Canada⁵³⁸. When in February 2009 Bilfinger announced that they would not commence work on Princes Street and advised of additional costs of between £50-£80m (see Section 8B below), the Council's Transport Convenor noted:

⁵³⁴ James Donaldson transcript 112.3-112.11

⁵³⁵ Richard Jeffrey transcript 64.2-64.15. Keysberg did not accept making this comment: Jochen Keysberg transcript 50.13-50.16

⁵³⁶ TRI00000097_0051 para 302

⁵³⁷ CEC00867402, CEC00901595_0002, http://www.bilfinger.com/fileadmin/corporate_webseite/investor_relations/berichterstattung/2008/en/Bilfinger_ZB_300608_eng.pdf pg5

⁵³⁸ TRI00000085_0155 para 360, TRI00000025_0081 para 235-238, TIE00032924_0002, TIE00032719, CEC00901595, CEC00488524_0014, CEC00010631, CEC02084346_0047, CZS00000086_0001

*“The fact that this sum bears a great similarity to the amount that BB have lost on a job in Norway is obviously coincidental, but it is not Edinburgh’s place to help them balance their books.”*⁵³⁹

In September 2010, TIE issued a Remediable Termination Notice in respect of Infraco’s conduct, amounting to one hundred identified breaches of the contract, including failure to complete the works in accordance with the contract (clause 7.3.1), failure to manage SDS (clause 11.4), failure to provide estimates (clause 80.3), breach of confidentiality (clause 101.1), and failure to mitigate (clause 119)⁵⁴⁰.

By contrast, Martin Foerder claimed that if **Steven Bell** had acted on issues raised email by Jeffrey in an email⁵⁴¹ following a meeting in May 2009 with Foerder and Miguel Berrozpe, then there may not have been two years of disagreements⁵⁴². Jeffrey’s email noted a lack of trust between TIE and BSC, the consortium’s desire for an OSSA, and the disagreement over responsibility for design changes. Jeffrey however highlighted that the fundamental problem was the unfinished design, which was Bilfinger’s responsibility⁵⁴³, and commented that Bilfinger were “determined to drag everything out”. Jeffrey suggested mediation to resolve these matters⁵⁴⁴, which is what happened one month later, and is covered in section 10A below. The disagreement over responsibility for design changes was a central focus of the DRP process and is considered in Section 8D.

⁵³⁹ CEC00900879. See also TIE00032719, CEC00852883, TRI00000025_0082 para 237-238

⁵⁴⁰ CEC02084525 pages 12-19

⁵⁴¹ CEC00985815

⁵⁴² TRI00000095_0041 para 129-131

⁵⁴³ See Section 3C above

⁵⁴⁴ CEC00985815

8B – Princes Street dispute

On 22 October 2008, Bilfinger’s Project Director Colin Brady attended a meeting of the TPB, at which he noted that bus lane access on Princes Street would require to be resolved prior to work starting. One direction bus access was later agreed at this “amicable” meeting ⁵⁴⁵.

On 12 January 2009, TIE accordingly issued a Change Notice for a contingency bus lane ⁵⁴⁶, which was discussed at a meeting between the parties on the same date, at which time matters appeared to be proceeding without issue ⁵⁴⁷.

In a meeting on 10 February 2009 with **Steven Bell** and Stewart McGarrity, Richard Walker (accompanied by Robert Sheehan and others) announced that unless the construction programme was paused for six months to a year, Bilfinger would only work on a cost plus basis until design and utilities diversions were complete ⁵⁴⁸. At this time Princes Street was closed in anticipation of works commencing on 21 February ⁵⁴⁹. At the same meeting, Walker indicated that he anticipated additional project costs of between £50m and £80m ⁵⁵⁰.

The day after this meeting, Infracore prepared an estimate for the bus lane change ⁵⁵¹ amounting to £8000. On 13 February TIE issued Change Order 21, to a value of £6500

⁵⁴⁵ CEC01053731_0007, David Mackay transcript 106.12-106.13

⁵⁴⁶ CEC01032608_0002

⁵⁴⁷ CEC00354163_0001

⁵⁴⁸ TIE00089656_0003

⁵⁴⁹ TRI00000127_0107 para 12.3

⁵⁵⁰ TIE00089656_0003

⁵⁵¹ CEC01032608_0002

(agreeing the estimated actual costs but disputing the method of calculating preliminaries, head office overheads and profit) ⁵⁵².

On 18 February Sheehan emailed Bell indicating that Infraco did not have exclusive licence to Princes Street “inter alia due to maintaining a bus route” and that prior agreement on the estimate was required before work could commence. As such Infraco did not consider itself contractually obliged to work on Princes Street, but would consider any “proper instruction” to commence work, providing that said instruction contained:

“clear details on reimbursement of our actual costs and overheads, prelims and profit – further that TIE accept the risks associated with proceeding with the works under these circumstances” ⁵⁵³.

Sheehan reiterated the following day that Infraco would only proceed on a “demonstrable cost” basis ⁵⁵⁴.

On 19 February TIE instructed Infraco to proceed under clause 80.15 notwithstanding the disputed amount of £1500 ⁵⁵⁵. Infraco did not accept this instruction and demanded the £1500 in dispute before doing any work ⁵⁵⁶. In evidence Martin Foerder claimed that TIE’s introduction of a bus lane was “unforeseen” ⁵⁵⁷ and that TIE refused to issue a

⁵⁵² *ibid*

⁵⁵³ CEC00867153_0002

⁵⁵⁴ CEC00998523

⁵⁵⁵ CEC01032608_0003

⁵⁵⁶ TRI00000072_0057 para 104

⁵⁵⁷ Martin Foerder transcript 15.17-15.21

change order ⁵⁵⁸, both claims being demonstrably false standing the chronology outlined above. Foerder also suggested that the real problem was the MUDFA diversions ⁵⁵⁹, but was forced to concede that there was no mention of these issues in Sheehan's emails⁵⁶⁰.

David Mackay expressed the feeling within TIE by suggesting this positioning by Infracore - whilst Princes Street was shut for works to commence - was an obvious tactic⁵⁶¹ by which the city was being "held to ransom" ⁵⁶². In the face of such tactics, Mackay came under pressure both from CEC and from the Deputy First Minister John Swinney to "get it sorted" ⁵⁶³ despite Mackay's fear that any concessions on Princes Street would result in the same issue being exploited again in future ⁵⁶⁴ – as proved to be the case.

Whilst Swinney suggested in evidence that his instruction to "get it sorted" did not imply any need for an immediate solution and that a protracted process such as adjudication would have been palatable ⁵⁶⁵, this appears incredible, and not only because it conflicts with his own statement that he was pressurising TIE and CEC was to get the project moving ⁵⁶⁶ and with his earlier oral evidence to the same effect ⁵⁶⁷. The Transport Minister Stewart Stevenson wrote to the Council Leader Jenny Dawe (copied to

⁵⁵⁸ Martin Foerder transcript 194.10-194.18

⁵⁵⁹ Martin Foerder transcript 12.21-13.2

⁵⁶⁰ Martin Foerder transcript 192.8-192.14

⁵⁶¹ David Mackay transcript 95.5-95.12

⁵⁶² David Mackay transcript 96.15-96.17

⁵⁶³ David Mackay transcript 95.23-96.8, John Swinney transcript 111.6-111.11

⁵⁶⁴ David Mackay transcript 95.23-96.5, TRI00000113_0079 para 291

⁵⁶⁵ John Swinney transcript 112.13-113.11

⁵⁶⁶ TRI00000149_0075 Q219

⁵⁶⁷ John Swinney transcript 90.15-90.20

Mackay) at the end of February 2009 seeking reassurance that there would be an “early settlement” of the dispute ⁵⁶⁸. Dawe confirmed that both the Council and Ministers wanted the issue “sorted quickly” and that she informed the Council’s Chief Executive Tom Aitchison of the Council’s view ⁵⁶⁹. There was accordingly pressure on TIE from both Councillors, Council officers ⁵⁷⁰ and government to get the issue resolved as soon as possible.

Aitchison was in daily contact with Mackay on the issue ⁵⁷¹ and stated that he was pleased with Mackay’s resolution of the issue by reaching agreement in principle on a supplementary agreement ⁵⁷², which Aitchison verbally authorised at the time ⁵⁷³. Aitchison expressed the view that if TIE had not taken this “pragmatic” decision, he did not know what would have happened to the project ⁵⁷⁴. Swinney telephoned Mackay to thank him for resolving the dispute ⁵⁷⁵ and Aitchison sent a letter of thanks “for finding a way out” ⁵⁷⁶.

Inquiry counsel appeared to suggest to Mackay during his oral evidence that the proposal to work on a cost plus basis was made unprompted by TIE ⁵⁷⁷. Whilst Mackay’s recollection of events (unaided by any documentation) was imperfect, this suggestion is clearly shown to be incorrect both from the terms of the meeting with

⁵⁶⁸ CEC01891494_0006

⁵⁶⁹ Jennifer Dawe transcript 172.16-173.11

⁵⁷⁰ TRI00000019_0120 para 460

⁵⁷¹ Tom Aitchison transcript 153.19-153.23

⁵⁷² Tom Aitchison transcript 153.24-154.8

⁵⁷³ TIE00690752

⁵⁷⁴ Tom Aitchison transcript 154.13-154.22

⁵⁷⁵ David Mackay transcript 97.21-97.24

⁵⁷⁶ CEC00990488

⁵⁷⁷ David Mackay transcript 107.11-107.13, 140.16-140.19, 143.23-143.24

Walker on 10 February and Sheehan's emails on 18 and 19 February ⁵⁷⁸. BSC thereafter wrote to TIE on 6 March proposing to secure progress by amending the Infraco contract ⁵⁷⁹, which TIE initially rejected, suggesting that clause 65 could be used to cover extension of time and additional costs ⁵⁸⁰. Bilfinger then issued a public statement, in breach of the contract's confidentiality provisions ⁵⁸¹. Mackay was clear that his agreement to the PSSA was a reluctant one made under enormous pressure⁵⁸². Ultimately the PSSA resulted in a 17% premium on costs, after Infraco had claimed 65%⁵⁸³.

Whilst the PSSA did unlock the dispute, the work then completed by the consortium on Princes Street proved to be defective. Walker blamed these defects on rain ⁵⁸⁴, though as Bell pointed out, the work took place over several months, during which time inclement weather could be expected ⁵⁸⁵. In fact it appears that the problem appears to have been with the composition of the asphalt used, together with poor workmanship⁵⁸⁶. Infraco accepted responsibility for the defects ⁵⁸⁷ and the asphalt was replaced with concrete ⁵⁸⁸, at Infraco's cost.

⁵⁷⁸ David Mackay transcript 159.17-159.25; Sheehan's email of 19 February proposing demonstrable costs is also detailed in the Inquiry Statement of Main Documents and Events para 12.3 (TRI00000127_0107).

⁵⁷⁹ CEC01033118

⁵⁸⁰ CEC01033117

⁵⁸¹ CEC01034100

⁵⁸² David Mackay transcript 97.15-97.20, 98.17-98.22

⁵⁸³ David Mackay transcript 98.12-98.14

⁵⁸⁴ TRI00000072_0077 para 136

⁵⁸⁵ Steven Bell transcript 41.13-41.21 (Wednesday 23 October)

⁵⁸⁶ CEC00441829, CEC00279667, CEC02084518 pages 2-3

⁵⁸⁷ Martin Foerder transcript 49.16-49.19

⁵⁸⁸ James Donaldson transcript 150.23-151.10

8C – TIE's strategic options

It has been suggested to witnesses by Inquiry counsel that TIE may not have had a 'Plan B' if the strategy of pursuing disputes through adjudication failed⁵⁸⁹. This is incorrect. First, the use of the DRP procedure was never 'Plan A'. Early disagreements with Infraco had been the subject of informal negotiation and discussion, with escalation where required⁵⁹⁰. When the major dispute over Princes Street emerged in early 2009, TIE not only agreed the PSSA as a way forward but also set up the Project Management Panel (PMP) as a mechanism to resolve outstanding issues⁵⁹¹. When that proved ineffective, TIE went to mediation with Infraco⁵⁹² in the summer of 2009. Only when that process failed to resolve the issues⁵⁹³ was the DRP process initiated⁵⁹⁴.

Secondly, the DRP process was never the only strategic option which TIE pursued. TIE engaged in a number of workstreams simultaneously under the umbrella of Project Pitchfork, including consideration of:

- truncation of the route (becoming Project Carlisle and later Project Phoenix),
- the possible ejection of Bilfinger from the consortium, and
- termination – either by agreement (Project Separation) or unilaterally for breach (Project Notice)⁵⁹⁵.

⁵⁸⁹ Richard Jeffrey transcript 94.8-94.13, 120.5-120.10 (Wednesday 8 November)

⁵⁹⁰ Steven Bell transcript 42.10-44.4 (Wednesday 25 October), CEC00167376_0007

⁵⁹¹ CEC00167376_0008

⁵⁹² See Section 10A below

⁵⁹³ CEC00376412_0015

⁵⁹⁴ With TPB approval: CEC00167376_0008. See also CEC00750538.

⁵⁹⁵ For which see Section 9 below

By April 2010, the strategies being developed by TIE also included: consideration of an OSSA ⁵⁹⁶; instructions to proceed under clause 80.13; an audit of BSC's management of the design; an offer of Extension of Time; the "Siemens 33 initiative" to resolve identified key issues; and assertive application of the contract ⁵⁹⁷.

These options had been discussed with CEC as early as March 2009 following the Princes Street dispute ⁵⁹⁸, at which time it was noted that:

"DRP can only be a short term solution to problems in the hope that commercial settlement in TIE Ltd's favour brings about a positive change in attitude of BB"⁵⁹⁹.

By January 2010 CEC Legal considered that whilst the attritional approach through DRP would not work, the alternative of a commercial settlement would require money that "we simply don't have" ⁶⁰⁰. The idea that "the money would have run out" if TIE had simply accepted the contractor's claims was echoed by Transport Scotland ⁶⁰¹.

The Council's Chief Executive approved the use of the DRP process, noting that TIE were concerned about the public purse and the budget, and were not acquiescing to

⁵⁹⁶ CEC00368373 is TIE's rejection of BSC's OSSA proposal, as not meeting Best Value.

⁵⁹⁷ CEC00236405_0003. Appendix 1 below sets out an abbreviated timeline showing the extent to which the DRP process overlapped with mediation, Project Carlisle and the use of RTNs.

⁵⁹⁸ CEC00892626_0004

⁵⁹⁹ CEC00892626_0006

⁶⁰⁰ CEC00473790. On the impact of Jeffrey's arrival, Stewart McGarrity commented: "Richard brought a fresh perspective and renewed vigour and leadership to the engagement with Infracore and the strategies/steps being taken to resolve matters... He was instrumental in sourcing much of the additional legal and technical expertise TIE brought on board in an attempt to progress matters from mid 2009." (TRI00000059_0238 Q45)

⁶⁰¹ TRI00000061_0020 para 49

unsubstantiated claims⁶⁰². The full history of the disputes and TIE's strategy is outlined in the Project Resolution Report to the TPB in December 2010, which notes:

*“without DRP, Infracore would continue with damaging obstinacy and no resolution on either entitlement or value would be reached unless TIE simply conceded across the board to demonstrably inflated claims... not deploying DRP would have meant ignoring the proper contractual mechanism.”*⁶⁰³

⁶⁰² Tom Aitchison transcript 160.9-160.16

⁶⁰³ WED00000641_0028

8D – Legal advice on disputes

Andrew Fitchie claimed that he advised TIE to deploy contractual remedies to resolve issues with SDS ⁶⁰⁴, which was not favoured by **Steven Bell** ⁶⁰⁵. This claim is however directly contradicted by the written advice of his then partner Fenella Mason, who said that serving a contractual notice on SDS would create an adversarial relationship, to the detriment of the project ⁶⁰⁶.

Fitchie also claimed that he advised that TIE should have gone to DRP on the Infracore contract in summer 2008, shortly after financial close ⁶⁰⁷. Again however this is at odds with DLA's written advice in February 2009, which stated at that time:

“DLA are of the opinion that TIE’s objectives would need to be considered in detail and clearly focused before any dispute was referred to adjudication” ⁶⁰⁸.

DLA advised that senior counsel's Opinion be obtained first ⁶⁰⁹. This was accordingly done, with DLA preparing a brief for senior counsel as discussed in Section 7B above. The positive advice by DLA and Calum MacNeill QC ⁶¹⁰ in the summer of 2009 led to TIE's use of DRPs on the disputed sections of the contract ⁶¹¹ following the unsuccessful attempts at mediation. It should also be noted that the idea of going

⁶⁰⁴ Andrew Fitchie transcript 37.4-37.12 (Wednesday 11 October), TRI00000102_0099 para 5.138

⁶⁰⁵ TRI00000102_0102 para 5.157, TRI00000102_0105 para 5.169.

⁶⁰⁶ CEC01881982. TIE escalated issues with SDS, with Willie Gallagher initiating high level discussions with Tom O'Neill, Parsons Brinckerhoff's Vice President in the USA – CEC01826306, CEC01387400_0011, TRI00000037_0041 para 141, TRI00000109_0027 Q16(2).

⁶⁰⁷ TRI00000102_0248 para 8.25, 8.32

⁶⁰⁸ CEC01032828_0003

⁶⁰⁹ CEC01032828_0004

⁶¹⁰ CEC00901460

⁶¹¹ Richard Jeffrey transcript 90.24-93.15 (Wednesday 8 November)

straight to dispute procedures was contrary to the policy of the Council when it took over the running of the project post mediation ⁶¹².

TIE's strategy was informed by the legal advice it received, not only from DLA and senior counsel but also from McGrigors, whom **Richard Jeffrey** instructed in order to challenge the existing advice ⁶¹³. In August 2009 McGrigors produced a paper opining that the question of whether a Notified Departure has occurred is a question of fact (and specifically engineering judgement) as to whether the IFC drawings represent normal design development and do not reveal changes of design principle, shape, form or specification⁶¹⁴.

Despite Brandon Nolan's evidence that he saw significant problems with PA1 from the outset ⁶¹⁵, this position was reiterated by McGrigors in October 2009:

"The Infraco will therefore not be entitled to a Mandatory TIE change where the change has arisen as a result of design development of the BDDI... Whether change falls within design development will be a question of fact, and in particular, engineering development." ⁶¹⁶

Accordingly TIE had supportive advice from both firms and from senior counsel going into the adjudications on Carrick Knowe and Gogarburn: nobody pointed out to TIE at that time that PA1 was fundamentally flawed or that the concept of normal design development was redundant on a literal reading. As such it is understandable that

⁶¹² See Sue Bruce transcript 161.24-162.16 and Section 11C below

⁶¹³ Richard Jeffrey transcript 207.21-208.6 (Wednesday 8 November), Brandon Nolan transcript 118.2-118.6

⁶¹⁴ CEC00805685

⁶¹⁵ Brandon Nolan transcript 115.17-116.2

⁶¹⁶ CEC00797337_0005 para 34

Jeffrey considered the adverse decisions in Carrick Knowe and Gogarburn a “surprise”⁶¹⁷.

According to Nolan, focus thereafter went into considering the words carefully in their context to see if some formulation could be arrived at objectively to avoid a situation where every BDDI to IFC change was a Notified Departure ⁶¹⁸. There was recognition that this would have a huge impact on price, albeit that it was not time critical at that point because Infracore were proceeding with the works ⁶¹⁹.

DLA’s advice on the Carrick Knowe and Gogarburn decisions was that the adjudicator had got it wrong, and suggested that the appropriate remedy was to obtain senior counsel’s Opinion (again) on a potential challenge ⁶²⁰. A summary produced by DLA in December 2009 showed various areas of disagreement on contractual interpretation between DLA, McGrigors and Richard Keen QC ⁶²¹. This left TIE in a “very unclear position” ⁶²².

Keen produced an Opinion in January 2010 which set out that:

- the Construction Works Price was not limited to what appeared on the BDDI, contrary to the adjudication decision ⁶²³;
- where work was not depicted on BDDI but was called for in the ERs, a Notified

⁶¹⁷ Brandon Nolan transcript 139.8-139.11

⁶¹⁸ Brandon Nolan transcript 139.12-139.17

⁶¹⁹ Brandon Nolan transcript 139.21-139.24

⁶²⁰ CEC00479430

⁶²¹ CEC00651408

⁶²² Richard Jeffrey transcript 129.13-129.20 (Wednesday 8 November)

⁶²³ CEC00648853_0007

Departure did not occur⁶²⁴; however

- the Infraco interpretation of PA1 argued at the adjudication was to be preferred to the TIE interpretation, ie any change to shape, form, principle or specification falls outwith normal design development⁶²⁵.

The latter view was at odds with the position of both DLA and McGrigors that the Infraco interpretation led to a commercially absurd result⁶²⁶.

The same month, Mr Wilson reached an alternative analysis of PA1 in the Russell Road adjudication, noting that “something has gone wrong with the language”⁶²⁷. McGrigors followed this with a report in February 2010 saying the same thing and arguing that a literal interpretation would allow Infraco to recover costs for changes they promoted or changes necessary to meet their obligations under the ERs⁶²⁸. The report also noted that court action to challenge the adjudications would take many months⁶²⁹, a point echoed by Nolan in his oral evidence⁶³⁰ who considered that there would be greater practical benefit in obtaining a different outcome in another adjudication than in challenging the original adjudication⁶³¹.

⁶²⁴ *ibid*

⁶²⁵ CEC00648853_0008

⁶²⁶ CEC00651408 para 2.6

⁶²⁷ CEC00034842_0020, para 100

⁶²⁸ CEC00618945 para 5-7

⁶²⁹ CEC00618945 para 51

⁶³⁰ Brandon Nolan transcript 156.20-157.3

⁶³¹ Brandon Nolan transcript 157.4-157.8

The argument that something had 'gone wrong' with the words was continued in McGrigor's further report in March 2010⁶³². McGrigors sought to expand on this argument by instructing an English QC, Helen Davies⁶³³. The advice from Davies in April 2010 was that a literal reading of PA1 would "emasculate" the concept of normal design development and was unlikely to have been the intent, but considered the prospects of a court ruling in TIE's favour as "uncertain"⁶³⁴.

Crucially, the evidence of Ian Laing, as the consortium's principal lawyer, supports the argument that parties did not intend to emasculate the concept of normal design development. Despite being the author of the redraft of PA1 in March 2008, he did not consider that the effect of that redraft was to render normal design development redundant:

*"I still read the document, rightly or wrongly, as indicating that there are – there is the possibility of a development of design which is not a change in the design principle, shape, form and/or specification that would not be caught by this Pricing Assumption".*⁶³⁵

The McGrigors report in March additionally advised that there was a "strong argument" that TIE were entitled to instruct Infracore to progress work under clauses 34 and 80 even where there was a dispute⁶³⁶. McGrigors produced a further paper to this effect⁶³⁷ in May 2010. Unfortunately Lord Dervaird did not agree, leading to another significant

⁶³² CEC00591754 para 7.1

⁶³³ CEC00592602

⁶³⁴ CEC00323249

⁶³⁵ Ian Laing transcript 36.8-36.13

⁶³⁶ CEC00591754 para 1.8

⁶³⁷ CEC02083927 contains the paper at page 6: see Brandon Nolan transcript 159.20-160.9

adverse decision in August 2010 in the adjudication on the Murrayfield Underpass⁶³⁸. McGrigors produced written advice following further consultation with Richard Keen QC disagreeing with Lord Dervaird's interpretation of clause 80, but noting that prospects of challenge in court were limited⁶³⁹.

⁶³⁸ BFB00053462

⁶³⁹ CEC00098393 para 2. See also Keen's Opinion in September 2010 (CEC00034598)

8E - Dispute Resolution Procedure

The early decision on Carrick Knowe⁶⁴⁰ was undoubtedly disappointing for TIE⁶⁴¹ particularly in light of the legal advice TIE had received⁶⁴². However, TIE obtained comfort⁶⁴³ from the contrary analysis of Pricing Assumption 1 by a different adjudicator in the Russell Road decision:

“65. I do not agree that on a proper construction the Construction Works Price can be construed as being solely for the Works shown on the BDDI or any similar alternative construction.

100. It appears that something has gone wrong with the language of s3.4.1.1 as, on the face of it, on a literal reading some part must be redundant to give it meaning. I consider that the formulation advanced by TIE most nearly expresses the true intention of the parties.

101. As to ‘normal’ development, I consider that this is the progression towards the Employer’s Requirements as would be expected by an experienced contractor and his designer.

102. I agree with tie that the word ‘amendment’ can only apply to something shown on the BDDI drawings not an addition to achieve compliance with the Employer’s Requirements being the overriding obligation.

⁶⁴⁰ CEC00479431

⁶⁴¹ Richard Jeffrey transcript 107.3-107.5 (Wednesday 8 November)

⁶⁴² Richard Jeffrey transcript 79.24-81.2 (Wednesday 8 November), see Section 8D above

⁶⁴³ Richard Jeffrey transcript 9.1-9.10 (Thursday 9 November)

103. *On any of the definitions of design principle, shape, form and/or specification discussed, Infraco took the 'narrow' view that almost any detailed change was an amendment. It will be seen that I do not agree with the concept advanced by Infraco of 'reasonable' changes being excluded from the Pricing Assumption in order to give it meaning.*"⁶⁴⁴

In the subsequent decision on Tower Place Bridge, TIE accepted as a starting point that there had been a Notified Departure. Whilst Inquiry counsel suggested that this demonstrated a loss of confidence by TIE in its arguments⁶⁴⁵, this was a situation where TIE sought a rebate from Infraco for the Change as less work was required⁶⁴⁶. As a result of the adjudication, Infraco required to pay £180k to TIE, whereas the contractor had initially claimed additional money amounting to £595k⁶⁴⁷.

The savings through the DRP process were significant; the process reduced claims totaling £24m down to £11.2m (see Figure 2 overleaf)⁶⁴⁸. The overall figure for claims submitted by Infraco up to May 2011 totaled £46.5m across 868 change notices, whereas agreed settlement amounted to a little over half that at £24.2m⁶⁴⁹. The Council's Chief Executive believed that TIE was right to pursue the DRPs for the savings obtained⁶⁵⁰.

⁶⁴⁴ CEC00034842 pages 14, 20, 21

⁶⁴⁵ Richard Jeffrey transcript 30.6-31.4 (Thursday 9 November)

⁶⁴⁶ TRI00000109_0148 Q120

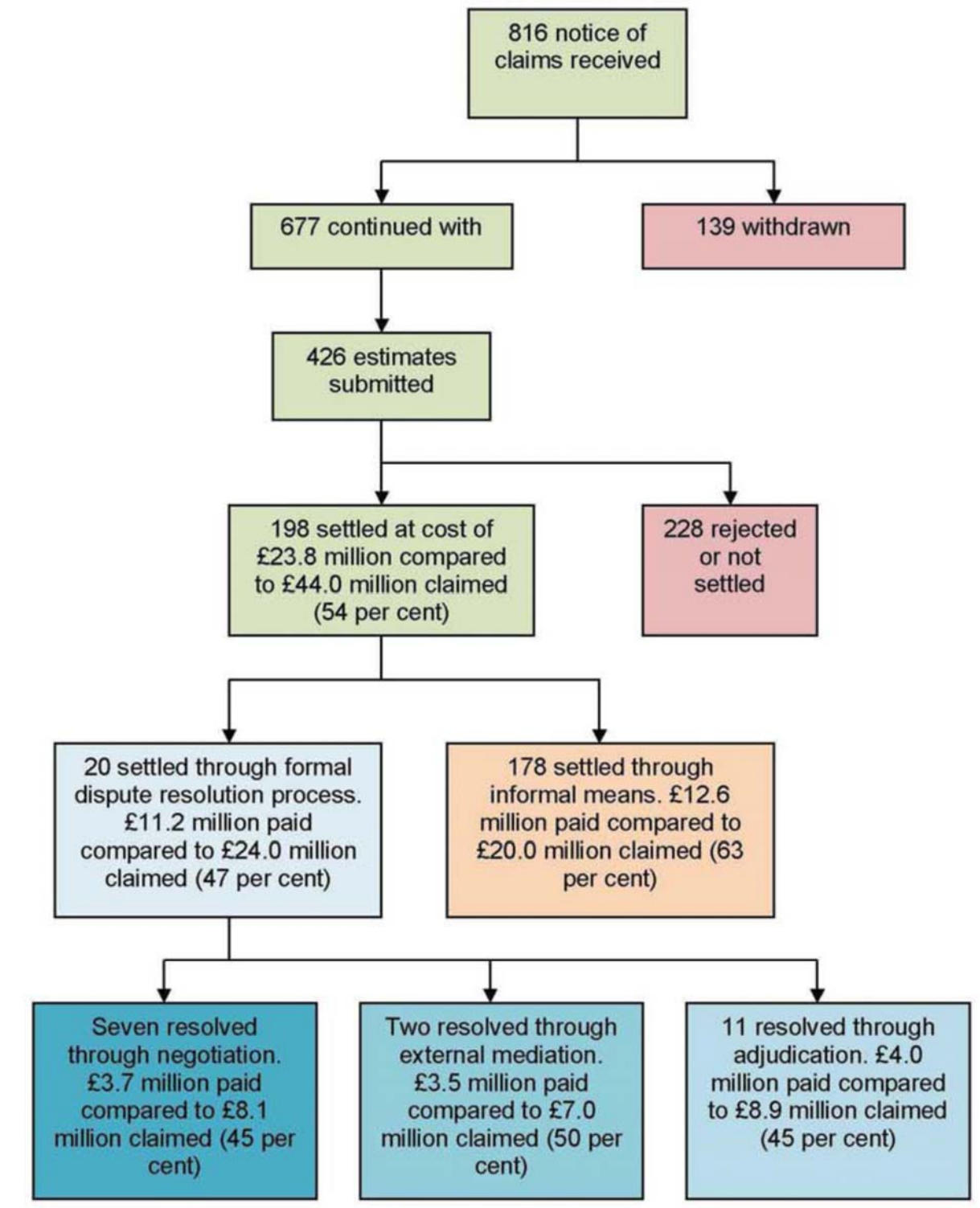
⁶⁴⁷ CEC00373726

⁶⁴⁸ Based on Audit Scotland report ADS00046 pages 21-22

⁶⁴⁹ TIE00086026_0011

⁶⁵⁰ Tom Aitchison transcript 168.18-168.20

FIGURE 2: Audit Scotland chart of INTCs



The Lord Dervaird decision on Murrayfield Underpass⁶⁵¹ was nevertheless a significant blow to TIE's strategy (albeit not a 'knockout blow' according to advice from senior counsel⁶⁵²). It effectively spelled the end of TIE's use of DRPs, which was "overtaken" by events and the use of other strategies⁶⁵³, namely the issue of RTNs⁶⁵⁴ and efforts to agree a settlement price for a reduced scope⁶⁵⁵.

⁶⁵¹ BFB00053462

⁶⁵² CEC00098393_0002

⁶⁵³ Richard Jeffrey transcript 38.19-38.25 (Thursday 9 November)

⁶⁵⁴ See Section 9 below

⁶⁵⁵ See Section 10 below

8F – DRP reporting

Several councillors recalled being told that TIE was “winning” the adjudications when that later did not appear to be the case⁶⁵⁶. Some alleged that this suggestion came from **Richard Jeffrey’s** briefings⁶⁵⁷. This was characterised as “a deliberate and coordinated campaign” on TIE’s part by the former Council Leader Donald Anderson⁶⁵⁸. It is significant however that during the period in question, Anderson was working as a consultant for the consortium⁶⁵⁹. In the face of various forensic evidence including various sets of TPB papers⁶⁶⁰, and an email from Jeffrey to party leaders⁶⁶¹ in April 2010, Anderson agreed that these reports were accurate⁶⁶² and was forced to concede that he actually had “no idea” what TIE had told Councillors⁶⁶³.

Three of the five Councillors who voiced this recollection (Dawe, Whyte, Cardownie) were recipients of the aforementioned email from Jeffrey, which set out that:

“Some of these issues have been decided at adjudication, which BB are claiming TIE have ‘lost’. It is true that we did not get all the results at adjudication we would have liked, however it is also true that the results do not support BB’s extreme view of their entitlements either... In our duty to secure best value for public money expended... we cannot and will not simply hand over public money

⁶⁵⁶ Lesley Hinds transcript 30.12-30.23, Euan Aitken transcript 124.2-124.12

⁶⁵⁷ Jennifer Dawe transcript 62.12-63.4, Iain Whyte transcript 84.11-84.19, Steve Cardownie transcript 94.6-94.16

⁶⁵⁸ Donald Anderson transcript 217.14-218.1 (Wednesday 6 September)

⁶⁵⁹ Donald Anderson transcript 195.7-195.11 (Wednesday 6 September)

⁶⁶⁰ CEC00416111_0006, CEC00473005_0047, CEC00223543_0027, TIE00896978_0003

⁶⁶¹ TRS00010706

⁶⁶² Donald Anderson transcript 30.22-31.3, 32.21-33.2, 33.21-34.9 cf 36.22-37.11 (Thursday 7 September)

⁶⁶³ Donald Anderson transcript 25.16-25.25 (Thursday 7 September)

with no justification in order to buy progress which, for absolute clarity, we have already paid for”.

The Council’s Transport Convenor, who sat on the TPB, recalled Jeffrey saying that the decisions in Gogarburn and Carrick Knowe had gone against TIE ⁶⁶⁴, and being told that on Russell Road, TIE had lost on principle but had made a saving on costs ⁶⁶⁵.

It was suggested that Shepherd & Wedderburn had concluded that TIE had put a positive gloss on some of the outcomes ⁶⁶⁶, but it should be noted that the summary which Shepherd & Wedderburn were analysing came not from TIE but from DLA ⁶⁶⁷. There has also been focus by the Inquiry on the use of the phrase “finely balanced” to describe the outcome of the adjudications. That expression appears in a report from Council officers and not from TIE ⁶⁶⁸ – indeed the report was drafted by Nick Smith of CEC Legal ⁶⁶⁹ who had read the decisions himself and who had confirmed to the Transport Convenor that TIE’s summary of the DRPs provided by **Steven Bell** ⁶⁷⁰ was

⁶⁶⁴ Gordon Mackenzie transcript 76.16-77.3

⁶⁶⁵ Gordon Mackenzie transcript 84.14-84.23

⁶⁶⁶ CEC00013525, Nick Smith transcript 105.24-106.7 (Thursday 14 September)

⁶⁶⁷ CEC00006489, CEC00006490, Nick Smith transcript 107.22-108.1 (Thursday 14 September)

⁶⁶⁸ CEC02083184, Donald McGougan transcript 78.5-78.18 (Thursday 30 November)

⁶⁶⁹ TRI00000280_0001. Smith indicated in evidence that the phrase “finely balanced” came originally from Richard Jeffrey (Nick Smith transcript 86.7-86.9). It appears that Jeffrey may have been attempting in June 2010 to curb Smith’s original description of progress as “positive” (WED00000652_0001 – “Richard confirmed that positive is too strong a word... Finely balanced, robust and constructive are better”). In any event, Smith used the phrase again in a further report in October 2010 despite further decisions having been received in the interim. (TRI00000280_0002)

⁶⁷⁰ CEC00242593

“broadly accurate”⁶⁷¹. It was likewise Council officers who determined that the adjudication decisions should not be released to elected members⁶⁷².

Looking at the formal TIE reports, in January 2010 TIE reported that the adjudicator in Gogarburn/Carrick Knowe:

*“found largely in favour of the position taken by BSC”*⁶⁷³.

It was suggested by Inquiry counsel that this was inaccurate as the decision was “entirely” in favour of BSC⁶⁷⁴, however it is clear looking at the Carrick Knowe decision that the adjudicator himself stated:

*“the responding party have only been partially successful”*⁶⁷⁵

and several items in dispute were found not to be Notified Departures⁶⁷⁶.

In the same report it is stated that Russell Road resulted in a “significant saving” on the estimate provided by BSC:

*“and the adjudicator agreed with TIE on many of the principles in dispute”*⁶⁷⁷.

It is submitted, contrary to the position put to witnesses by Inquiry counsel⁶⁷⁸ that the latter suggestion is accurate⁶⁷⁹. A full report on Russell Road was promised the next

⁶⁷¹ CEC00242585

⁶⁷² CEC00012776, Alastair Maclean transcript 175.3-175.13

⁶⁷³ CEC00472988_0008

⁶⁷⁴ Richard Jeffrey transcript 180.24-181.4 (Wednesday 8 November)

⁶⁷⁵ CEC00479431 para 7.76

⁶⁷⁶ CEC00479431 para 7.62, 7.70, 7.74

⁶⁷⁷ CEC00472988_0008

⁶⁷⁸ Richard Jeffrey transcript 184.15-185.12 (Wednesday 8 November)

⁶⁷⁹ See the parts quoted in Section 8E above

month but was not followed up ⁶⁸⁰, which Bell has accepted as an oversight that should have been corrected ⁶⁸¹.

The report to Transport Scotland in May 2010 merely indicated that the DRP on Tower Place Bridge had been “useful in reducing costs” ⁶⁸². John Ramsay complained that the outcome was not detailed ⁶⁸³. It should be noted however that this was a decision in which it was agreed between parties that a Notified Departure had occurred and the sole issue was costs: the adjudicator determined that Infracore required to rebate TIE, despite having claimed additional money ⁶⁸⁴.

The August 2010 report ⁶⁸⁵ said of Lord Dervaird’s decision on Murrayfield Underpass only that it “gives some useful interpretation”, and Ramsay claimed that he could not discern from this that TIE had lost ⁶⁸⁶. Bell conceded that this report could have been amplified, but there was concern about setting out in a publicly available report how damaging the decision had been for TIE ⁶⁸⁷. In any event Jeffrey pointed out that Transport Scotland were briefed at various levels on the disputes ⁶⁸⁸ and that someone as immersed in the project as Ramsay could not have been as ignorant of the issues as he professed to be ⁶⁸⁹.

⁶⁸⁰ CEC00474413

⁶⁸¹ TRI00000267 Q3

⁶⁸² CEC00113637_0003

⁶⁸³ John Ramsay transcript 90.17-90.24 (Thursday 28 September)

⁶⁸⁴ CEC00373726

⁶⁸⁵ CEC00021014_0003

⁶⁸⁶ John Ramsay transcript 102.19-103.14 (Thursday 28 September)

⁶⁸⁷ TRI00000267 Q3

⁶⁸⁸ Richard Jeffrey transcript 103.19-104.7 (Thursday 9 November), TRI00000097_0043 para 249

⁶⁸⁹ Richard Jeffrey transcript 104.25-105.11 (Thursday 9 November)

One of the fundamental dilemmas experienced by TIE was between full disclosure to Councillors and the maintenance of commercial confidentiality⁶⁹⁰. CEC officers were however fully apprised⁶⁹¹, as can be seen from the IPG reports, which contained an outline each month of DRPs including outcome and cost forecasts (covered in Section 8G below). Generally the IPG reports contained detail noted to be absent from the TPB or TS reports, including in relation to Russell Road⁶⁹² and Murrayfield Underpass⁶⁹³. These reports demonstrate that TIE was passing this information outwith the formal documentation, which was susceptible to FOISA requests⁶⁹⁴. TIE also produced a (FOISA exempt) report to the TPB in December 2010 which set out all of the adjudication decisions in considerable detail⁶⁹⁵.

⁶⁹⁰ Richard Jeffrey transcript 18.3-20.20 (Thursday 9 November), Donald McGougan transcript 190.16-191.3, CEC00373764_0031

⁶⁹¹ Richard Jeffrey transcript 20.10-20.15 (Thursday 9 November)

⁶⁹² CEC00450032_0005

⁶⁹³ CEC00012472_0006

⁶⁹⁴ TIE received many such requests: TRI00000109_0183

⁶⁹⁵ WED00000641 pages 30-36

8G – Financial forecasts

A further criticism by John Ramsay was that Transport Scotland were interested in the costs associated with and flowing from the DRPs ⁶⁹⁶. He conceded that the June 2010 report ⁶⁹⁷ on the reduction of claims through the DRP process (from £18.2m to £7.6m) was helpful, but that Transport Scotland also required to understand the impact of the disputes on the overall cost of the project ⁶⁹⁸. In that vein it was recognised by the Council's Finance Director that it was very difficult for anyone to report properly on the Anticipated Final Cost (AFC) given the scale of the disputes ⁶⁹⁹. Looking again however at the Council's IPG reports, it can be seen that TIE did provide this financial information to the Council throughout the period, albeit that this information is not recorded in the TPB reports (the former unlike the latter being FOISA exempt) ⁷⁰⁰.

As early as March 2009, TIE provided outturn forecasts for various of the strategic options being considered at that time in the wake of the dispute on Princes Street. Of termination it was said:

"this option presents very significant uncertainties" ⁷⁰¹

on price, whilst of negotiated settlement it was noted:

"in essence this is what BB want and is likely to be a very (likely prohibitively) expensive option indeed" ⁷⁰².

⁶⁹⁶ John Ramsay transcript 95.22-96.1 (Thursday 28 September)

⁶⁹⁷ CEC00113638

⁶⁹⁸ John Ramsay transcript 96.2-7 (Thursday 28 September)

⁶⁹⁹ Donald McGougan transcript 132.7-132.16 (Wednesday 29 November)

⁷⁰⁰ Marshall Poulton transcript 170.4-17

⁷⁰¹ CEC00892626_0004

By contrast TIE was able to forecast the scenario where Bilfinger were replaced and the project completed with an alternate civils contractor as being in the range of £573m-£593m. Pursuing the disputes through the DRP meanwhile gave an estimated outturn cost of £571m, though it was noted that:

“DRP can only be a short term solution” ⁷⁰³.

By November 2009, TIE had provided CEC with outturn forecasts for various truncation options ⁷⁰⁴, whilst the base case estimate for the project had increased to £595.8m ⁷⁰⁵. In addition, TIE had provided estimates of the likely costs arising from all matters in DRP, taking account of both the TIE view and the BSC view.

In answer to Ramsay’s complaint, it should be noted that the forecasts produced (£23.2m on the TIE view and £44.9m on the BSC view) are not simply an aggregation of the particular costs associated with each individual DRP (these total £3m on the TIE view and £14m on the BSC view) but an assessment of the overall impact of the DRPs on the final project costs ⁷⁰⁶, as:

“the value of a DRP principle may significantly differ from the value of the DRP dispute itself” ⁷⁰⁷.

This is further illustrated by the report for the following month, where £4.4m was added to the project forecast following “a significant re-evaluation of the design related issues”

⁷⁰² ibid

⁷⁰³ CEC00892626_0005

⁷⁰⁴ CEC00677450_0004

⁷⁰⁵ CEC00677450_0005

⁷⁰⁶ CEC00677450_0006

⁷⁰⁷ CEC00677450_0005

in light of the Gogarburn and Carrick Knowe decisions ⁷⁰⁸, notwithstanding that the particular costs associated with those decisions were thought to amount only to £580k⁷⁰⁹.

By August 2010, by which time many of the DRP decisions had been received, the IPG report notes:

“the majority of these DRPs are by their nature, changes to scope and therefore not included in the original project budget. However, they are included in the revised cost estimates prepared by TIE.” ⁷¹⁰

The Council’s Finance Director noted that it was difficult if not impossible for anyone to accurately forecast a revised budget outturn whilst the key items remained in dispute given the flaws at the heart of the contract ⁷¹¹. He noted that TIE were not as successful in the adjudications as had been envisaged given the legal advice received, and that exhausting that process led to the move for mediation ⁷¹², which is covered in Section 10 below.

⁷⁰⁸ CEC00469787_0003

⁷⁰⁹ CEC00469787_0006, Marshall Poulton transcript 171.9-171.23

⁷¹⁰ CEC00242752_0006

⁷¹¹ Donald McGougan transcript 73.11-73.18 (Thursday 30 November)

⁷¹² Donald McGougan transcript 73.24-74.8 (Thursday 30 November)

(9) TERMINATION

9A – Strategy & legal advice

It appears that there were differences in opinion between TIE and CEC in relation to the possibility of terminating either the Infraco contract as a whole, or else Bilfinger's involvement in it. Alistair Maclean of CEC Legal in particular expressed his view that TIE were by October 2010:

*“hurtling down a termination path”*⁷¹³.

That view is not supported by a more objective examination of the contemporaneous evidence.

Termination first appears to have been considered in the wake of the Princes Street dispute, as can be seen from the IPG report of March 2009. This set out TIE's strategic options including termination, which was noted as presenting:

*“very significant uncertainties”*⁷¹⁴.

A year later, TIE's Pitchfork report set out that the issues around the termination option:

*“include the probable loss of the project, the waste of public investment and the likely risk of expensive litigation”*⁷¹⁵.

⁷¹³ TRI00000055_0018 para 54

⁷¹⁴ CEC00892626_0004

⁷¹⁵ CEC00167376_0010

It went on to note:

*“The termination option assumes cessation of the project for the foreseeable future. It is possible that full re-procurement of the infrastructure could be executed, but there are material uncertainties about funding availability, timescales, market appetite and therefore costs.”*⁷¹⁶

Similarly, the Council’s Director of City Development noted that termination would be extremely difficult and with huge liabilities⁷¹⁷. As noted by **Richard Jeffrey**, termination was a “nuclear option”, which TIE did not want to jump to before trying other options, particularly where legal advice suggested that the contract did provide levers to force Infracore performance⁷¹⁸.

Maclean however suggested that Jeffrey briefed the Labour group of Councillors on 12 October 2010 by saying that there was a “cast iron right” to terminate the contract according to senior counsel’s advice⁷¹⁹. This suggestion, denied by Jeffrey⁷²⁰ and unsupported by any other evidence, is directly at odds with the email Jeffrey sent to Maclean and others the very next day. In that email, Jeffrey said that termination would be likely to end up:

⁷¹⁶ CEC00167376_0015

⁷¹⁷ TRI00000108_0060 Q71(c)

⁷¹⁸ Richard Jeffrey transcript 74.11-74.25 (Wednesday 8 November)

⁷¹⁹ Alistair Maclean transcript 24.19-24.25

⁷²⁰ Richard Jeffrey transcript 47.22-48.8 (Thursday 9 November)

*“in the courts, which is expensive, lengthy and risky for all parties, with no certainty of outcome.”*⁷²¹

Earlier, in August, Jeffrey had expressed concern about Maclean’s colleague Nick Smith apparently being keen to terminate:

*“My concern is that Nick Smith sees termination as the ‘cleanest’ option, it appeals to him to get a definitive ruling on who is right and who is wrong, ignoring the practical consequences of termination. Hopefully Andrew [Fitchie] can calm things down with CEC Legal tomorrow.”*⁷²²

Furthermore, in November 2010 Jeffrey wrote to Maclean and others indicating that:

*“we are all agreed that terminating the contract now is not the preferred way forward.”*⁷²³

In the same month, Jeffrey also wrote to Councillor Balfour (copied to the Council’s Chief Executive) saying:

*“I will not make a recommendation to terminate the contract unless and until I am satisfied that such a course of action represents the best course... I have urged you all to be careful not to give the impression that termination is a foregone conclusion.”*⁷²⁴

⁷²¹ CEC00012737_0005

⁷²² CEC00210811_0002

⁷²³ CEC00013441

⁷²⁴ CEC00014240

Part of the strategy employed by TIE in the latter part of 2010 was the issue of Remediable Termination Notices (RTNs) under the Infracore contract, a strategy supported by CEC ⁷²⁵. Tony Rush, who was involved in the preparation of these notices, considered that the nomenclature was unfortunate, as they were merely a step in the process of contractual enforcement ⁷²⁶, intended as much to strengthen TIE's position for settlement as they were to lead to termination of the contract ⁷²⁷.

BSC's response to the RTNs was twofold – they both denied their validity and simultaneously produced rectification plans ⁷²⁸. It was noted that Richard Keen's opinion in November 2010 was that it would be unsafe to rely on the issued RTNs due to problems in their formulation ⁷²⁹ – advice which came as a surprise and a source of frustration to TIE ⁷³⁰ not least because Keen had been involved in their drafting and had:

“appeared comfortable with the approach taken... and raised no concerns” ⁷³¹.

Maclean also suggested that TIE's contractual enforcement should have focused on BSC's failure to produce the design whereas he suggested that the RTNs had been served for “other things” ⁷³². When presented with TIE's issued RTN for failure to

⁷²⁵ CEC00242889

⁷²⁶ Anthony Rush transcript 159.3-159.7, see also TRI00000109_0156 Q130

⁷²⁷ WED00000641_0046

⁷²⁸ TRI00000127_0008

⁷²⁹ TIE00080959_0004

⁷³⁰ Richard Jeffrey transcript 107.5-107.10 (Thursday 9 November)

⁷³¹ CEC00207814

⁷³² TRI00000055_0031 para 79

produce an assured design for on street works ⁷³³, Maclean was however forced to concede he had been wrong ⁷³⁴.

As will be explored in the next section, it appears that CEC may have inflated the projected costs of termination in order to justify the price paid for settlement at Mar Hall. CEC appears to have been more reluctant than TIE to consider the termination option, as evidenced not only by Maclean (who was one of the core CEC team at Mar Hall in agreeing the settlement ⁷³⁵) but also by Colin Smith's report in January 2011, two months prior to the mediation, in which he proposed to concentrate on settlement (Project Phoenix) and develop the termination option (Project Separation) merely as "a negotiating lever" ⁷³⁶. Alan Coyle, who worked closely with Smith from that point onward, agreed that Smith had already rejected the notion of termination before detailed calculations had been carried out on the relative merits of the two options ⁷³⁷.

Consideration of the termination option is also likely to have been affected by the "extraordinarily high" quotation ⁷³⁸ given by Andrew Fitchie for the potential legal costs associated with terminating ⁷³⁹.

Audit Scotland, in a report in February 2011, suggested that CEC and TIE would have to:

"consider fully the consequences of... terminating the contract with BBS" ⁷⁴⁰.

⁷³³ CEC02084522

⁷³⁴ Alastair Maclean transcript 95.11-96.4

⁷³⁵ Vic Emery transcript 7.15-7.19

⁷³⁶ CEC02083835_0002

⁷³⁷ Alan Coyle transcript 72.19-75.9 (Friday 22 September)

⁷³⁸ Brandon Nolan transcript 194.19-194.21

⁷³⁹ CEC00043521

In his report to the Inquiry, Stewart Fair concluded that inadequate consideration had been given to termination ⁷⁴¹. It is therefore of note that John Swinney considered that settlement was far preferable to termination as the latter would:

“blight the city for years”⁷⁴².

Indeed, Swinney considered that he had a veto and that he would not have permitted the contract to be terminated ⁷⁴³.

⁷⁴⁰ ADS00046_0008

⁷⁴¹ TRI00000264 pg5 para 1.12, pg11 para 1.18, 1.19, pg31 para 3.38-3.51

⁷⁴² TRI00000149_0097 Q286

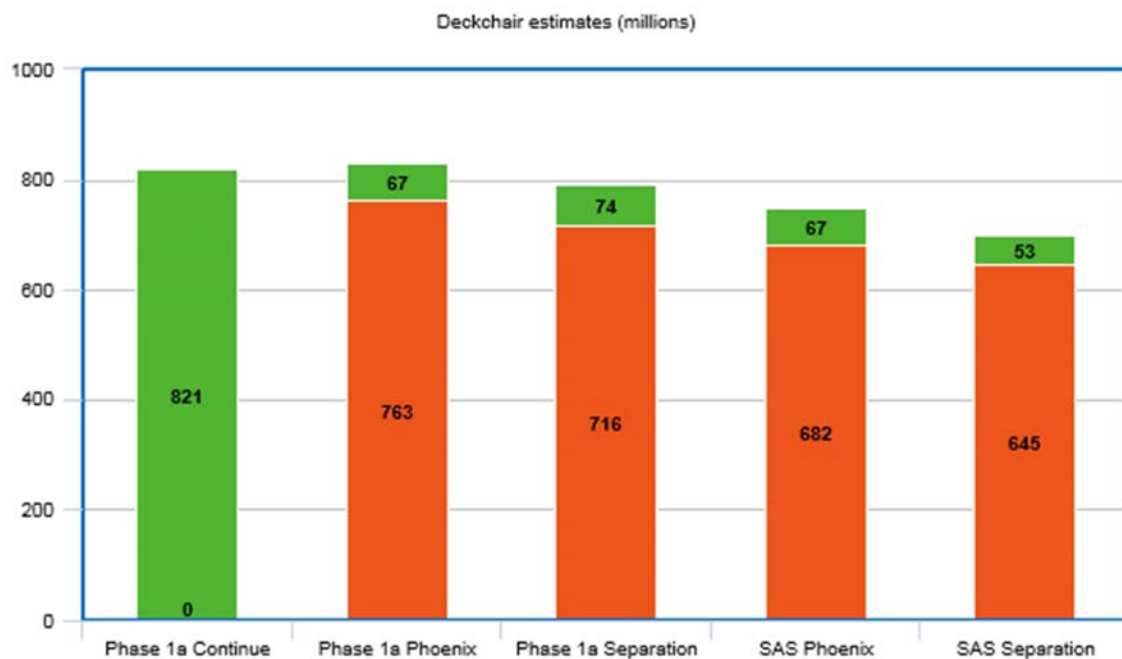
⁷⁴³ *ibid* Q287

9B – Financial forecasts

In early March 2011, in preparation for Mar Hall, TIE prepared a ‘deckchair’ spreadsheet estimating the potential costs of settlement via Project Phoenix as against termination and reprocurement ⁷⁴⁴. This set out the following estimates for project outturn costs:

Whole of Phase 1a – Continue ‘as is’:	£821m
Whole of Phase 1a – Project Phoenix:	£763m-£830m
Whole of Phase 1a – Terminate & re-procure:	£716m-£790m
To St Andrews Square – Project Phoenix:	£682m-£749m
To St Andrews Square – Terminate & re-procure:	£645m-£698m

FIGURE 3 – Project cost estimates:



⁷⁴⁴ TIE00355078

Accordingly for both completion of the whole route and for truncation, TIE's estimates projected that Project Phoenix would cost more than termination and reprocurement. These figures were prepared by TIE's commercial and financial teams (Dennis Murray, Stewart McGarrity, Gregor Roberts) together with QS firms Cyril Sweett and Gordon Harris Partnership (GHP)⁷⁴⁵ and with input from Acutus on extension of time (EOT)⁷⁴⁶.

Alan Coyle, who was embedded in TIE from CEC's finance team for this purpose, stated that he had a good understanding of the financials⁷⁴⁷ but equally said that he did not have the knowledge to assess whether the numbers were correct⁷⁴⁸. These comments are difficult to reconcile with each other, and the latter is especially difficult to square with the purpose of his secondment.

Colin Smith, who appears to have discounted the possibility of termination before these numbers were compiled⁷⁴⁹, disagreed with **Richard Jeffrey** and **Steven Bell** about the TIE figures on the first day at Mar Hall⁷⁵⁰. In a CEC report prepared in June 2012, Smith criticised the TIE figures, on the basis that they failed in his view to include for items such as 'bad project premium', settlement costs, and other significant risks totalling £150m⁷⁵¹. The net result of Smith's reconciliation of the figures was retrospectively to justify CEC's preference for settlement over termination.

⁷⁴⁵ Alan Coyle transcript 181.1-181.7 (Thursday 14 September)

⁷⁴⁶ TRI00000249_0012 Q23

⁷⁴⁷ Alan Coyle transcript 170.22-171.3 (Thursday 14 September)

⁷⁴⁸ Alan Coyle transcript 188.17-188.24 (Thursday 14 September)

⁷⁴⁹ CEC02083835_0002 and see Section 9A above

⁷⁵⁰ Alan Coyle transcript 170.24-171.3 (Friday 22 September)

⁷⁵¹ WED00000134 pg234-235

It has not been possible from available material to discern the justification for the £150m figure put forward by Smith. Indeed it is completely at odds with a spreadsheet compiled in June 2011 by Coyle (who worked closely with Smith in the period) and provided to Councillors in order to reach a decision on the settlement agreement ⁷⁵² which gave the anticipated cost of termination and reprourement at £1,144m. This was approximately £300m above the figure suggested by Smith's later report. When asked to explain the difference, all Coyle could say was that there were "further risks" that "hadn't been thought of" ⁷⁵³.

There is no clear basis or justification for the figures in Coyle's spreadsheet. Coyle utilised various figures created by Smith, including:

- £80m 'settlement premium',
- £106m 'primary' risk,
- £40m 'bad project' risk,
- £25m inflation risk,
- £77.5m 'specified and exclusion' risk, and
- £10m 'systems' risk

TIE's commercial director Dennis Murray, having seen these figures for the first time via the Inquiry, noted that they are all unexplained and seem "extraordinarily high" ⁷⁵⁴.

⁷⁵² CEC02085613

⁷⁵³ Alan Coyle transcript 171.1 (Friday 22 September)

⁷⁵⁴ TRI00000249_0018 Q27

It appears impossible to reconcile these numbers for risk and settlement costs, totalling £342m, with the £150m Smith accuses TIE of failing to include for the very same items. It is also difficult to reconcile the £262m of additional risk items with Smith's evidence to the Inquiry in which he said that the premium for 'walking away' was the only problem with the Separation forecasts prepared by TIE ⁷⁵⁵ (which he rejected on no more than "gut instinct" ⁷⁵⁶). Smith claimed that the Pricing Assumptions in Schedule 4 formed the basis for the additional risk items he created ⁷⁵⁷, but it is difficult if not impossible to discern any nexus between those pricing assumptions and either 'bad project' premium, settlement costs or inflation. Regarding the £80m settlement premium, Smith gave two mutually contradictory explanations for how he arrived at that figure, one being that he added a "broad brush" £50m for settlement, £20m for demobilisation and £10m for further claims ⁷⁵⁸, the other being that £80m was simply taken as 10% of the overall project cost of £800m ⁷⁵⁹.

The Coyle £1,144m estimate for termination and reprourement also included £54m paid under MOV4 ⁷⁶⁰. This payment flowed from agreement at Mar Hall and comprised payments which were contentious. It therefore would not have been paid in the event of termination being pursued instead - however, by the time that the Council were asked to vote on the matter, MOV4 was a *fait accompli* ⁷⁶¹.

⁷⁵⁵ Colin Smith transcript 29.1-29.9

⁷⁵⁶ Colin Smith transcript 40.22-41.2

⁷⁵⁷ Colin Smith transcript 48.18-49.19

⁷⁵⁸ CEC02085613 item 59, Colin Smith transcript 109.9-109.19

⁷⁵⁹ Colin Smith transcript 111.5-111.9

⁷⁶⁰ CEC02085613

⁷⁶¹ See Section 11A below

Additionally, the Coyle estimate included £82m paid to Infraco for EOT/Preliminaries. This figure is allegedly drawn ⁷⁶² from a report by McGrigors in June 2011 ⁷⁶³, but in that report McGrigors emphasised that Infraco could not recover both preliminaries and additional delay costs for the same period as that would lead to double recovery ⁷⁶⁴. McGrigors' preferred figure for payment of EOT/preliminaries was £54m ⁷⁶⁵.

Coyle also set the cost of putting the project on hold at £22m (irrespective of whether the project was reprocured or mothballed), again citing McGrigors' report ⁷⁶⁶. However McGrigors actually put this cost at £11.9m (based on TIE figures) and explicitly stated that this was a cost which only applied if there was no reprocurement ⁷⁶⁷.

Coyle likewise cited the McGrigors report for the suggested £199m cost for a new contractor, whereas the report actually gave that cost as £185m ⁷⁶⁸.

Lastly it is noted that the McGrigors report does not contain anything which substantiates Smith's £262m for additional risks or £80m settlement premium – both being over and above full payment to Infraco for preliminaries, EOT and outstanding changes. Taking both Coyle's 'errors' and Smith's "gut instinct" numbers into account (see figure 4 overleaf), Coyle's figures for termination and reprocurement include approximately £400m of costs not included by McGrigors.

⁷⁶² CEC02085613 footnote 6

⁷⁶³ USB00000384

⁷⁶⁴ USB00000384_0006 para 1.10(d)

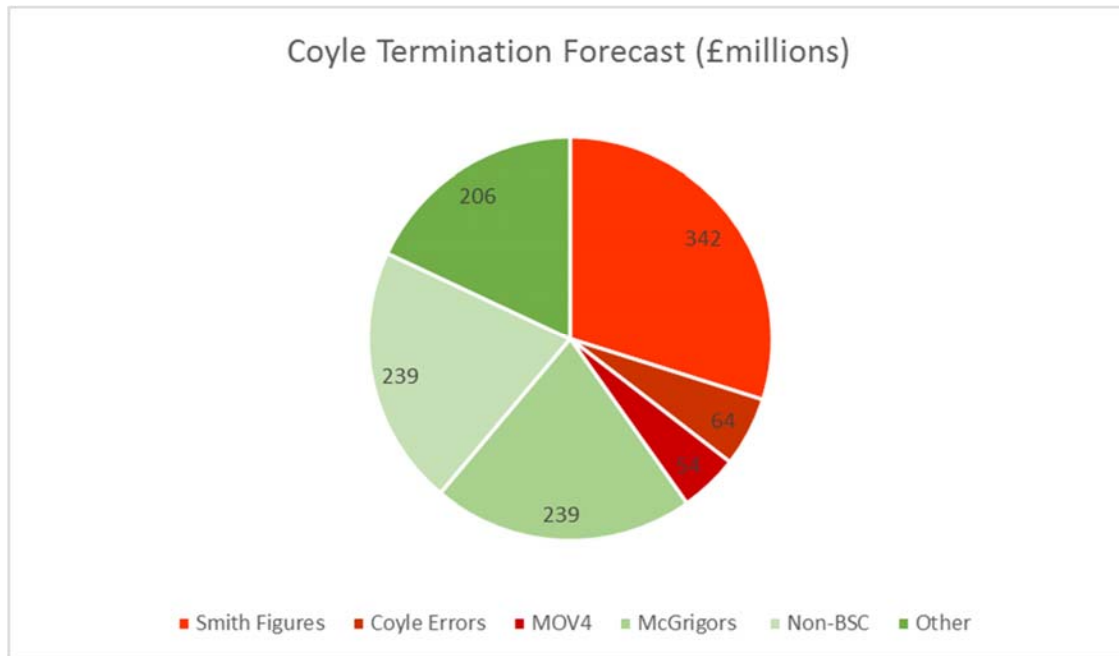
⁷⁶⁵ USB00000384 para 11.24

⁷⁶⁶ CEC02085613 footnote 6

⁷⁶⁷ USB00000384_0053 para 17.1-17.4

⁷⁶⁸ USB00000384 para 15.2. This figure was based on an exercise conducted by TIE, and is itself higher than the figure of £178m based on Cyril Sweet's assessment (para 15.3).

FIGURE 4: Coyle's £1.14bn



Coyle suggested in evidence that TIE “ignored” the views of its own experts ⁷⁶⁹. It is believed that he was referring to the difference between TIE’s deckchair spreadsheet and the numbers generated by GHP. Those differences are reconciled in a spreadsheet, included in Smith’s report ⁷⁷⁰, which notes that:

- GHP erroneously understated the Infracore Phoenix price by £39m;
- GHP deducted the £40m on street costs from their calculation, which TIE included as relevant (since the comparison was for costs to St Andrews Square);

⁷⁶⁹ Alan Coyle transcript 53.17-54.24 (Friday 22 September)

⁷⁷⁰ WED00000134_0243

- GHP also included no sum to cover exclusions from the Phoenix price, which TIE costed at £20m - and Smith costed even higher at £80m ⁷⁷¹.

Perhaps a significant factor in CEC's decision not to pursue the termination option was that it considered that the Council would be unable to borrow to cover the costs because there would be no asset to borrow against ⁷⁷². Stewart Fair's report to the Inquiry is critical of this purported justification for selecting settlement over termination⁷⁷³.

⁷⁷¹ WED00000134_0235

⁷⁷² CEC02044271 para 3.36, TRI00000060_0272

⁷⁷³ TRI00000264_0033, para 3.42

(10) MEDIATION

10A – Moves toward mediation

Three months after resolution of the Princes Street dispute and the establishment of the PMP, TIE and Infraco held a mediation “marathon” at the end of June 2009⁷⁷⁴. This covered all of the main issues in dispute at that time, including consideration of an OSSA⁷⁷⁵, design misalignment⁷⁷⁶, extension of time⁷⁷⁷, evaluation of change⁷⁷⁸, agreement on BDDI drawings⁷⁷⁹, and Hilton Hotel car park⁷⁸⁰ (the latter of which was to become the subject of the first adjudication). This mediation was unsuccessful⁷⁸¹ and it is submitted that the principal difference from the later mediation at Mar Hall was that in June 2009, CEC were not offering a substantial sum of money over and above the existing budget in order to resolve the issues in dispute.

Agreement ultimately could not be reached in relation to a proposed OSSA, principally because the Infraco proposal did not in TIE’s view meet Best Value obligations and because it removed Infraco’s responsibility for concurrent delay⁷⁸².

In 2010 TIE and BSC attempted to reach resolution via Project Carlisle, led by Tony Rush for TIE⁷⁸³ and Michael Flynn for Siemens⁷⁸⁴. From TIE’s perspective, the main

⁷⁷⁴ TRI00000097_0021 para 121; TRI00000109_0119 Q95

⁷⁷⁵ CEC00951732

⁷⁷⁶ CEC00951734

⁷⁷⁷ CEC00951737

⁷⁷⁸ CEC00951736

⁷⁷⁹ CEC00951740

⁷⁸⁰ CEC00951735

⁷⁸¹ TRI00000097_0025 para 145

⁷⁸² CEC00368373

reasons that Carlisle did not achieve resolution were: first, that the price was higher than TIE considered justifiable ⁷⁸⁵ and secondly, that the Carlisle offer contained a number of rewritten pricing assumptions and so was not going to provide cost or programme certainty in a situation where the design – under the supervision of the contractor – remained incomplete ⁷⁸⁶.

The renewed move to mediation in late 2010 came at the direction of CEC ⁷⁸⁷ and Scottish Ministers ⁷⁸⁸. However, John Swinney noted that it would have been very difficult to have gone to mediation earlier, before exhausting the contract provisions ⁷⁸⁹.

⁷⁸³ Richard Jeffrey transcript 45.10-45.14 (Thursday 9 November)

⁷⁸⁴ TRI00000141_0003

⁷⁸⁵ CEC00337646

⁷⁸⁶ Richard Jeffrey transcript 46.16-46.25 (Thursday 9 November). A full summary of the Carlisle negotiations is set out in WED00000641 pages 40-45. TIE's Carlisle 2 counter offer can be found at CEC00129943.

⁷⁸⁷ Jennifer Dawe transcript 184.19-185.12

⁷⁸⁸ John Swinney transcript 135.2-135.4, TRI00000149 Q275, Q318, Q325

⁷⁸⁹ TRI00000149_0116 Q360

10B – Mar Hall

According to CEC's Director of Finance, the Council went into mediation with the key concern being to come out with a solution that would deliver an asset, against a background where all legal avenues other than termination had been pursued, and the ruling from Lord Dervaird meant that TIE could not force the contractor to work ⁷⁹⁰.

For CEC, termination was less desirable than a settlement to complete the tramline ⁷⁹¹.

Termination was therefore effectively disregarded by CEC as an alternative ⁷⁹². In

Richard Jeffrey's words:

"if you took the view that litigation would be a catastrophic outcome then you could use that justification for almost any price you liked." ⁷⁹³

This position was effectively crystallised on the eve of the mediation by Colin Smith's addition of £150m of additional hypothetical costs to the TIE estimates on termination⁷⁹⁴. It is of note that the opening statement by the Council's new Chief Executive Sue Bruce emphasised that:

"I approach these next few days determined to reach an agreement which will deliver the tram system" ⁷⁹⁵.

⁷⁹⁰ Donald McGougan transcript 83.8-83.15 (Thursday 30 November)

⁷⁹¹ Donald McGougan transcript 83.24-84.4 (Thursday 30 November)

⁷⁹² Vic Emery transcript 39.4-39.8

⁷⁹³ Richard Jeffrey transcript 74.6-74.10 (Thursday 9 November)

⁷⁹⁴ See Section 9B above

⁷⁹⁵ CEC02084575_0003 (emphasis in original)

It appears to be a matter of consensus that Bruce was the principal decision maker at Mar Hall, supported by TIE's new Chairman Vic Emery⁷⁹⁶, plus Ainslie McLaughlin from Transport Scotland⁷⁹⁷, and advised by Colin Smith⁷⁹⁸, Brandon Nolan of McGrigors, Alistair Maclean⁷⁹⁹, Tony Rush and Nigel Robson⁸⁰⁰. Jeffrey as Chief Executive of TIE was effectively "frozen out" of the process⁸⁰¹.

In reaching settlement, CEC appear to have proceeded on the basis of conceding the Infraco argument⁸⁰² that MUDFA was the principal cause of delay⁸⁰³. This is despite having provided substantial criticisms of Infraco's £42.8m claim for utilities-related delay in TIE's opening mediation statement in line with the conclusions reached by Acutus⁸⁰⁴. Emery had described this consortium claim as:

*"disproportionately high and unreasonable"*⁸⁰⁵.

CEC also appears to have backed down from its initial criticism that Siemens' Project Phoenix price had effectively doubled from the original contract price⁸⁰⁶. A few days prior to the mediation, Nolan had written to Infraco's representatives saying:

⁷⁹⁶ Alastair Maclean transcript 119.2-119.12, Steven Bell transcript 52.20-53.2 (Wednesday 25 October), Anthony Rush transcript 182.20-183.5, Brandon Nolan transcript 195.25-196.9

⁷⁹⁷ Donald McGougan transcript 85.5-85.10 (Thursday 30 November)

⁷⁹⁸ Dave Anderson transcript 184.4-184.8

⁷⁹⁹ Vic Emery transcript 7.3-7.6

⁸⁰⁰ Anthony Rush transcript 182.13-183.9, Vic Emery transcript 16.14-17.5, WED00000582

⁸⁰¹ WED00000582, Richard Jeffrey transcript 68.12-18 (Thursday 9 November), Anthony Rush transcript 183.10-13

⁸⁰² BFB00053260_0012 para 5.9

⁸⁰³ Alan Coyle transcript 114.20-115.3, Vic Emery transcript 77.1-11, Colin Smith transcript 42.4-17, WED00000134_0234

⁸⁰⁴ BFB00053300 pages 13-15, WED00000533, and see Section 4B above

⁸⁰⁵ TRI00000035_0010 Q36

⁸⁰⁶ TRI00000035_0007 Q27, CEC02084575_0013

"It is not clear what the basis for this increase is. There is no Schedule Part 4 PA1 issue in relation to Siemens' work which has undergone little change since tender."⁸⁰⁷

However, CEC ended up agreeing a deal which only involved a modest reduction in Siemens inflated price⁸⁰⁸, and which additionally paid for all Siemens equipment⁸⁰⁹ despite some items later being cancelled⁸¹⁰. Siemens in any event sought to later recover the discounted amount by including the difference in their on street price⁸¹¹.

It appears that on the eve of the mediation that CEC agreed a 'trigger point' of £740m for all project costs as being the ceiling above which a Phoenix deal would not be entered into with the consortium⁸¹². Alan Coyle confirmed that the proposed deal two days later was within that trigger point⁸¹³ despite it actually coming out slightly higher at £743.5m on his calculations⁸¹⁴ (see figure 5 overleaf). More pertinently however, his calculations assumed an on street price of £22.5m, whereas the agreement was actually for a target sum of £39m⁸¹⁵, which put the deal well above the trigger point. The target sum later increased further⁸¹⁶.

⁸⁰⁷ BFB00094604_0004

⁸⁰⁸ SIE00000184

⁸⁰⁹ CEC02084685

⁸¹⁰ Vic Emery transcript 83.15-83.25

⁸¹¹ See Section 11B below

⁸¹² WED00000582_0002

⁸¹³ *ibid*

⁸¹⁴ WED00000134_0250

⁸¹⁵ CEC02084685

⁸¹⁶ See Section 11B below

FIGURE 5 – Coyle’s Mar Hall spreadsheet

Airport - St Andrew Square - CAF Re-Novate (CEC Proposal)
11/03/2011

	CEC (9/3/11) £m	BSC Counter (9/3/11) £m	CEC Counter 1 (9/3/11) £m	N
BSC PPP	384.0	404.0	362.5	
TR Exclusions	80.0			
Airport to Haymarket (Infraco) (Current Contract Arrangements)	304.0	404.0	362.5	
Haymarket to St Andrew Sq (Target Cost/Pain Gain Share)	20.5		22.5	
Infrastructure	324.5	404.0	385.0	
CAF	61.0	65.0	62.0	
Primary Risk	29.0	29.0		
Contingencies	25.0	25.0	30.0	
Delay	25.0	25.0		
Total Budget "Final Account"	464.5	548.0	477.0	
Non BSC Costs to date	236.5	236.5	236.5	
Project Management Costs to go	30.0	30.0	30.0	
	266.5	266.5	266.5	
Total Project Costs	731.0	814.5	743.5	
Less Agreed Funding			545.0	
GAP			198.5	

It appears to be a matter of consensus that **Richard Jeffrey** and **Steven Bell** expressed disagreement with the deal which was struck as being too generous to the consortium⁸¹⁷. Surprisingly however, Emery indicated in his evidence that nobody

⁸¹⁷ e.g. Alan Coyle transcript 88.2-11, Steven Bell transcript 53.8-25 (Wednesday 25 October), Richard Jeffrey transcript 72.6-12 (Thursday 9 November), Anthony Rush transcript 184.24-185.2, Dennis Murray transcript 106.7-106.16

actually considered the deal to represent good value⁸¹⁸. CEC's Directors of Finance and City Development were "disappointed" with the final price, which seemed £50m to £75m too high based on Rush's analysis⁸¹⁹. This is despite Rush having apparently come up with the settlement figure⁸²⁰ which was effectively reached by splitting the difference between CEC's original offer and Infraco's counter offer⁸²¹.

By contrast, the TIE position as represented by Jeffrey and Bell was based on the numbers produced in a paper by TIE's commercial manager Dennis Murray and his QS team⁸²². Smith claimed that he did not recall having figures from Murray at the mediation⁸²³ and that Bell had not provided "granularity" for TIE's figures which he had requested at a meeting in January⁸²⁴. However Smith's own record of that meeting show only that he asked Bell to provide a copy of the contract, a copy of the programme and sets of meeting notes⁸²⁵. Murray was clear in his evidence that his paper was the basis of all the discussions he was involved in up to and at Mar Hall⁸²⁶. In any event, Bell did provide further information on TIE's figures right up to the days immediately prior to the mediation⁸²⁷, including a detailed breakdown and analysis of the Phoenix proposal⁸²⁸.

⁸¹⁸ Vic Emery transcript 49.16-49.24

⁸¹⁹ Donald McGougan transcript 89.8-89.9 (Thursday 30 November), TRI00000108_0106 Q140(f)

⁸²⁰ Anthony Rush transcript 179.8-179.11

⁸²¹ Vic Emery transcript 60.18-61.7

⁸²² Dennis Murray transcript 65.11-65.18, TIE00106500

⁸²³ Colin Smith transcript 79.24-80.6

⁸²⁴ Colin Smith transcript 21.4-21.15

⁸²⁵ CEC02083835_0006

⁸²⁶ Dennis Murray transcript 63.19-65.1

⁸²⁷ e.g. TIE00355077, TIE00355078

⁸²⁸ CEC02084639 and attachments

10C – Analysis of settlement figure

Dennis Murray built up a settlement estimate based on the contract price plus the value of all changes (current and anticipated) and additional sums for delay and extension of time⁸²⁹. These figures presupposed that Infraco's claims that a change had occurred were correct in each case⁸³⁰. This added up to £247m under TIE's estimates of the value of the changes and delays⁸³¹, and £280m under Infraco's estimates⁸³². TIE's estimates of value had been supported by an independent assessment carried out by Cyril Sweett, which gave very similar figures based both on the Schedule 4 rates and on market rates⁸³³. However even using the higher valuations given by Infraco, this is still very far short of the £362.5m agreed at Mar Hall⁸³⁴.

No justification for this agreed figure appears to have been provided at any time, nor indeed does it appear to be capable of justification. Breakdowns prepared by CEC have provided mutually contradictory explanations of how this figure was supposedly built up. A cost summary in November 2012 produced by Coyle indicated that the figure comprised £204m for the off street work, £25m for settlement of off street claims, £82m for settlement of on street claims, and £49m for settlement of system wide work⁸³⁵. This is in contrast to a different version produced by Coyle in the same month which

⁸²⁹ Dennis Murray transcript 67.13-68.2, TIE00106500_0002

⁸³⁰ Dennis Murray transcript 72.6-72.14

⁸³¹ TIE00106500_0015, Dennis Murray transcript 99.19-100.2

⁸³² TIE00106500_0016, Dennis Murray transcript 100.10-100.14

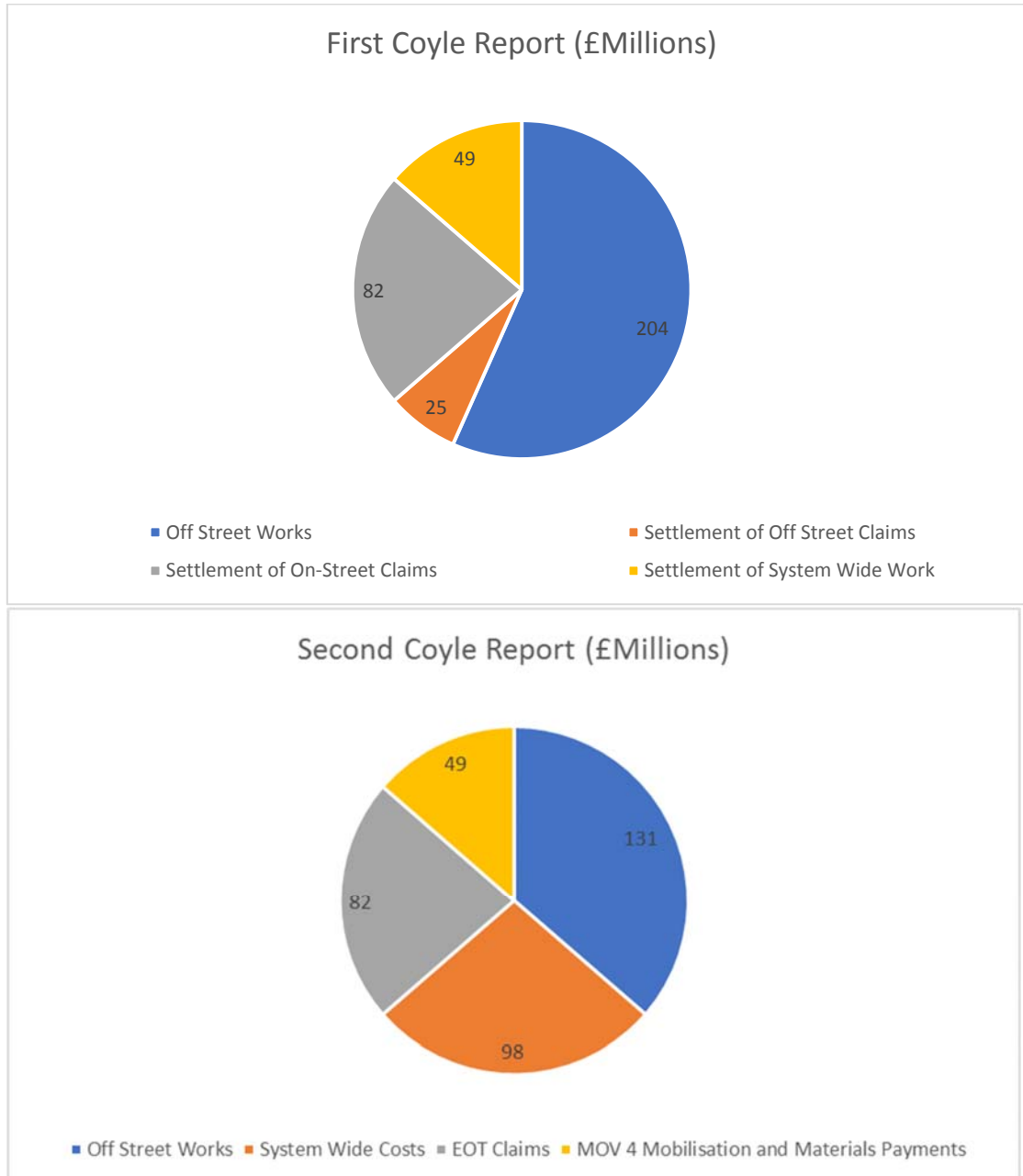
⁸³³ Dennis Murray transcript 86.20-87.3, TIE00106500_0021

⁸³⁴ CEC02084685, Dennis Murray transcript 104.8-105.16 – between £79 million and £115 million higher, as described by Inquiry counsel.

⁸³⁵ BFB00101644 (attachment to BFB00101643)

recorded that the £49m was for MOV4 mobilisation and materials payments, the £82m was for EOT claims, £98m for systems wide costs and £131m for the off street works⁸³⁶.

FIGURE 6 – Breakdown of Mar Hall figure



⁸³⁶ CEC01952969 footnote 6 (attachment to CEC01952968)

Emery considered that the price for off-street work and claims for changes and delay was likely to have been grossly inflated in a similar manner to the consortium's ultimate on street price⁸³⁷. Bruce suggested that the circa £160m of additional money paid to the consortium in terms of this deal was inevitable standing "TIE's track record on adjudications"⁸³⁸. However this materially ignores not only Murray's numbers and the conclusions of Acutus in relation to the causes of delay (as noted above) but also the fact that the final value of all agreed changes to that point in time was 52% of the original amounts claimed by Infracore⁸³⁹. The combined value of all changes claimed by Infracore, including their contentious claims for delay and extension of time, totalled £146m⁸⁴⁰. Even that, as the high end figure, is less than the amount effectively paid under the deal. In that context it is noteworthy that Bruce's reply to Jeffrey's protests over the price was:

*"This is about more than money"*⁸⁴¹.

In her opening mediation statement, Bruce had noted that whilst the original contract price amounted to £12.9m per kilometre (comparable to the system in Manchester), the Phoenix proposal equated to a cost of £33.4m per kilometre, which would make the Edinburgh tram system:

*"by some way the most expensive tram system of its type anywhere in the world"*⁸⁴².

⁸³⁷ Vic Emery transcript 107.22-108.2, and see Section 11B below

⁸³⁸ Susan Bruce transcript 55.19-55.23, 58.8-9

⁸³⁹ TIE00086026_0011

⁸⁴⁰ BFB00003297_0091

⁸⁴¹ TRI00000097_0060 para 354

Jeffrey had made this same point a few days earlier⁸⁴³. The final deal came out at around £30m per kilometre. When asked whether this or the original £13m per kilometre was closer to the industry norm, Bilfinger's Project Director was unable or unwilling to provide a direct answer⁸⁴⁴. This can perhaps be compared with his previous unsatisfactory response to why the consortium's proposed price for Phase 1b of the project tripled from £49.7m to £134m:

*"There was not a great deal of time spent to fine tune any exact costing"*⁸⁴⁵.

CEC's Director of City Development shared Jeffrey's views that the Phoenix price was excessively high⁸⁴⁶ and that the outcome at Mar Hall appeared to give the consortium everything that they wanted⁸⁴⁷.

The extension to the programme agreed "pursuant to Project Phoenix"⁸⁴⁸ moved the construction completion date from March 2011⁸⁴⁹ to March 2013⁸⁵⁰, an extension of 24 months. This extension of time, to complete work on a truncated route, compared unfavourably with the fact that the existing work was already overdue on a programme which had originally been 32 months (from May 2008 to January 2011⁸⁵¹) for the whole of the Infraco construction works to Newhaven⁸⁵².

⁸⁴² CEC02084575_0013

⁸⁴³ TIE00685894_0002

⁸⁴⁴ Martin Foerder transcript 152.5-153.20

⁸⁴⁵ TRI00000095_0044 para 135

⁸⁴⁶ TRI00000108_0103 Q136

⁸⁴⁷ TRI00000108_0106 Q140(c)

⁸⁴⁸ CEC02084685

⁸⁴⁹ WED00000641_0017

⁸⁵⁰ BFB00053258_0167

⁸⁵¹ The original extension from January 2011 to March 2011 was in Revision 1 of the programme.

In similar vein, Councillor Whyte noted that the cost of the infrastructure element of the Mar Hall deal seemed as high as the cost of starting from scratch despite the amount of work which had already been done ⁸⁵³. However Councillors were simply presented with the deal on a “take it or leave it” basis ⁸⁵⁴, informed by Coyle’s inflated costs for the alternative of termination ⁸⁵⁵.

This date was unaffected by the adjudication decision on MUDFA delay in July 2010 (WED00000641_0017).

⁸⁵² TRI00000112_0064 Q113(1)

⁸⁵³ Iain Whyte transcript 97.10-97.23

⁸⁵⁴ Iain Whyte transcript 98.10-98.16, Jeremy Balfour transcript 143.9-143.16, Steve Cardownie transcript 134.11-134.20

⁸⁵⁵ See Section 9B above

10D – Analysis of total project costs

The cost of apparent capitulation at Mar Hall should be compared to the combined cost of the problems which led to that point. On the basis of Murray's calculations, TIE's estimate of all changes (current and anticipated) was approximately £41 million, plus £13m of costs under the PSSA and £73m in preliminaries to cover delay⁸⁵⁶, giving a total cost for accrued issues up to Mar Hall of £127m.

By comparison, the deal at Mar Hall agreed a figure of £362.5m versus Murray's overall total of £247m (see Section 10C above), an increase of £115.5m. To that £115.5m premium the following figures should also be added:

- £30m of costs under MOV4 over and above the amount recommended by TIE⁸⁵⁷,
- £32m of on street costs over and above that recommended by TIE⁸⁵⁸, and
- £11m of costs for reprogramming paid by CEC despite Turner & Townsend's recommendation that it was not due⁸⁵⁹.

This puts the total cost of settlement at approximately £188m over and above the £127m attributable to the issues which existed pre-mediation.

⁸⁵⁶ TIE00106500_0015. Sum of £41m composed of £13.6m changes agreed, £19.5m changes to agree, and £8m changes not notified, the latter based on information from Infracore (Dennis Murray transcript 78.24-79.13).

⁸⁵⁷ See Section 11A below. It is conceded however that this £30m may fall to be treated as part of the £115.5m premium on the price at Mar Hall, and not an addition to it.

⁸⁵⁸ See Section 11B below

⁸⁵⁹ See Section 11C below

The above comparison does not include the cost of inflation against the amount borrowed to finance the Mar Hall deal, which totalled £182m ⁸⁶⁰, nor additional tram-related sums excluded from the tram budget totalling £44m ⁸⁶¹.

Stuart Fair also identified further sums 'missing' from CEC's official final cost of £776m, including CEC's legal costs of £2.3m ⁸⁶², and unclear accounting treatment of £59.9m of historical claims including aborted costs of Phase 1B and assets beyond St Andrews Square ⁸⁶³. Fair also noted that the 'final' figures produced by CEC were net of VAT ⁸⁶⁴.

It is difficult properly to consider the benefit/cost attributable to the reduction in scope. Truncation to Picardy Place was forecast to realise a saving of £66m when considered in November 2009 ⁸⁶⁵. By contrast, to build the current route to Newhaven as originally planned was forecast to cost £145m in the 2015 business case (£31m per kilometre)⁸⁶⁶. It is also difficult to compare like for like since the Mar Hall deal included for design and materials to Newhaven (with no breakdown) ⁸⁶⁷. Siemens' Carlisle price involved only a £3m reduction in costs for on street work despite the reduction in scope ⁸⁶⁸, whilst Bilfinger's Carlisle price of £234m ⁸⁶⁹ compares unfavourably with the contract Construction Works Price (for the whole Infraco scope to Newhaven) of £238m ⁸⁷⁰.

⁸⁶⁰ John Connarty transcript 39.1-39.7

⁸⁶¹ John Connarty transcript 31.15-32.8

⁸⁶² TRI00000264_0070 para 3.145

⁸⁶³ TRI00000264_0070 para 3.147

⁸⁶⁴ TRI00000264_0070 para 3.148

⁸⁶⁵ CEC00677450_0004

⁸⁶⁶ CEC02084232_0035

⁸⁶⁷ CEC02084685

⁸⁶⁸ CEC00183919_0030

⁸⁶⁹ CEC00183919_0011

⁸⁷⁰ USB00000032_0004

(11) POST SETTLEMENT

It has been suggested, particularly by those who were either responsible for or benefitted from the settlement agreement, that the project worked well after mediation, and after TIE were removed from the project. It has been noted by several observers that the improvement in relations with the contractor had been 'bought' by the circa £160m extra paid over to the contractor under the terms of the agreement. The Council's Transport Convenor noted that:

*"if the contractor has got what they want, things are made a lot simpler"*⁸⁷¹.

Meanwhile, CEC's Director of City Development noted that increased profit and reduced risk under the settlement agreement undoubtedly improved BSC's behaviour⁸⁷². Nevertheless, he raised concerns in August 2011 that Infracore were using the same tactics as they had in the lead up to contract close in 2008 and were seeking to unpick matters agreed at mediation⁸⁷³.

In any event, the rosy picture is inaccurate or at least incomplete, as a number of issues arose post Mar Hall. As expressed by Colin Smith:

*"There were many bumps in the road... I wouldn't want anyone to take the view that it was plain sailing from March 2011 to May 2014."*⁸⁷⁴

⁸⁷¹ TRI00000086_0157 para 485. See also TRI00000113_0075 para 279.

⁸⁷² TRI00000108_0114 para 151b

⁸⁷³ CEC01733343

⁸⁷⁴ Colin Smith transcript 169.17-169.20

For instance, despite agreeing a final settlement, Infraco gave notice of 352 changes after Mar Hall ⁸⁷⁵. In the final account, Infraco obtained even more money than was agreed in the final settlement terms, with almost £15m paid for changes ⁸⁷⁶, including a £4.5m payment for delay in signing the agreement ⁸⁷⁷ and £6.4m for the value engineering changes ⁸⁷⁸ which Turner & Townsend had advised CEC that Infraco were not entitled to ⁸⁷⁹.

Other issues are dealt with in greater detail below.

⁸⁷⁵ TRI00000072_0086 para 155, TRI00000095_0101 para 295

⁸⁷⁶ WED00000101_0004

⁸⁷⁷ WED00000101_0005

⁸⁷⁸ WED00000101_0008

⁸⁷⁹ See Section 11C below

11A – Minute of Variation 4

Part of the agreement reached at Mar Hall involved early payments to Infracore under Minute of Variation 4 (MOV4) to the Infracore contract⁸⁸⁰. These payments totalled £49m. They were characterised as a mobilisation payment⁸⁸¹ though this may have been a fiction: Martin Foerder considered that the payment was actually a settlement sum to get Infracore back to a cash neutral position⁸⁸².

The payments were made prior to approval of the deal by Councillors⁸⁸³; indeed the May 2011 report to Councillors failed to mention the £27m which had already been paid by that time⁸⁸⁴. A total of £36m was paid prior to MOV4 even being signed⁸⁸⁵, those payments being certified by Colin Smith and approved by the Council's Finance Director⁸⁸⁶ despite significant concerns being expressed by **Richard Jeffrey** and **Steven Bell**⁸⁸⁷. TIE's chairman Vic Emery indicated that no-one at CEC was addressing TIE's concerns⁸⁸⁸.

McGrigors, which drafted the Minute, noted that:

⁸⁸⁰ CEC01731817

⁸⁸¹ e.g. by Colin Smith CEC01927616. Compare this with the terms of the Minute itself, which set out payments of £27m and £13m for materials and equipment, and a £9m payment for unspecified purposes. (BFB00096810 pages 10-11).

⁸⁸² TRI00000095_0090 para 272

⁸⁸³ Alistair Maclean transcript 137.2-137.12

⁸⁸⁴ CEC01914650, Alistair Maclean transcript 137.24-138.3

⁸⁸⁵ Alan Coyle transcript 124.3-124.6 (Friday 22 September)

⁸⁸⁶ Alan Coyle transcript 124.13-125.17 (Friday 22 September)

⁸⁸⁷ TIE00687649, TIE00687654, TIE00686805, CEC02086878, CEC02086879, TIE00687929, CEC02087177, TIE00687801

⁸⁸⁸ CEC02087193

*“[t]here was considerable debate in relation to what the various payments... were intended to be in respect of.”*⁸⁸⁹

Jeffrey intimated that TIE’s assessment was that £19m was a more reasonable sum to pay than the £49m set out in MOV4, noting that the draft provided for:

*“time based payments for preliminaries unconnected with progress and without substantiation required.”*⁸⁹⁰

An earlier adjudication decision by Lord Dervaird had established that preliminaries under the original contract were a time based cost not dependent on achievement of milestones (para 16) but also that Infracore were required to substantiate their claims (para 17). In response to a request for clarification from Infracore, Lord Dervaird indicated that these should be valued in accordance with the rates in Schedule Part 5:

*“together with any adjustments or variations made thereto”*⁸⁹¹.

McGrigors advised TIE that Schedule Part 5 was:

*“progress-related... The starting point is therefore, to take the information in Schedule Part 5 and assess this against progress”.*⁸⁹²

CEC however do not appeared to have followed this advice. CEC’s payments of these sums, without approval of the TPB or proper governance⁸⁹³, led to the resignation *en masse* of TIE’s non executive directors⁸⁹⁴ shortly followed by Jeffrey himself⁸⁹⁵.

⁸⁸⁹ CEC02087178_0007

⁸⁹⁰ TIE00687649_0002, see also CEC02087177_0002

⁸⁹¹ BFB00053489_0008

⁸⁹² CEC02084588

TIE's concerns went beyond simply the amount of money paid over under MOV4. In an email on 14 April 2011 Bell set out to the CEC Executive a comprehensive analysis of issues with the proposed agreement, including:

- That the proposed self-certification process hindered TIE's statutory duties and removed Infraco's deliverables obligations and requirements for record keeping;
- The role, accountabilities and responsibilities of Smith as the Certifier were not compatible with the mechanics suggested by MOV4;
- There was no linkage of payment to completion of design, and no obligation to substantiate or opportunity to amend the value once certified;
- The payments (leaving aside that Bell could not objectively support their value) were not linked to completion of the design and there was no obligation to substantiate or amend them by reference to any milestones;
- The proposed moratorium was 'one sided', and given that TIE had previously served an RTN for Infraco's general conduct ⁸⁹⁶, the proposed prohibition on raising future RTNs on the same grounds would inhibit any action against Infraco's bad conduct in future.

Bell's conclusion was that the proposed agreement was not "equitable" and that CEC needed to understand:

"the size of the potential concessions they are signing up to" ⁸⁹⁷.

⁸⁹³ TRI00000089_0056 para 15

⁸⁹⁴ TIE00620232

⁸⁹⁵ TRI00000097_0061 para 376

⁸⁹⁶ CEC02084525, WED00000641_0050. See Section 8A above.

⁸⁹⁷ TIE00686636

Bell later sought confirmation from Dave Anderson (by then the project SRO) accepting that payment had been arranged by CEC solely on the basis of Smith's certification, and that execution of MOV4 would result in the project cost exceeding the budget available to TIE and TEL under the Operating Agreements ⁸⁹⁸.

Sue Bruce claimed that Bell's concerns were analysed and debated ⁸⁹⁹ but dismissed them on the basis that whilst she considered Bell to be a "very competent engineer", he wasn't:

"personally aligned to the mediation and post-mediation direction of travel" ⁹⁰⁰.

Ultimately she appeared disdainful of the fact that Bell was raising issues and asking 'awkward' questions ⁹⁰¹.

Infraco later sought uplift for additional preliminaries in August 2011. TIE's position as expressed by Bell was that:

"As far as TIE is aware (and no resource vouching is made by Infraco) there is no additional resource introduced to carry out the MOV4 scope and consequently the fixed period costs for preliminaries should be paid as time elapses. Infraco has claimed percentages to cover 'additional' preliminaries as if it were a change but claims this is only a mechanism utilised for cash flow purposes. If preliminaries were payable in addition to the fixed amounts in the Pricing Schedule then the resources should be claimed and vouched in the same way as

⁸⁹⁸ CEC02086879_0003. He had sought legal advice from McGrigors in relation to this issue: TIE00687794.

⁸⁹⁹ TRI00000084_0030 para 96

⁹⁰⁰ TRI00000084_0033 para 105

⁹⁰¹ *ibid*

*the labour plant and materials are. It is interesting to note this has not been done and BBUK has preferred a percentage adjustment which requires no evidence.*⁹⁰²

Smith nevertheless certified the additional payments⁹⁰³.

Alistair Maclean claimed that Councillors were given “very fulsome” briefings⁹⁰⁴ in relation to MOV4, though that is contradicted by the stark omissions in the report he prepared in May 2011 as noted above. The Council’s Transport Convenor noted by contrast that post mediation, CEC officers effectively took Councillors: ‘out of the loop’⁹⁰⁵.

⁹⁰² TIE00357031_0001

⁹⁰³ TIE00357030

⁹⁰⁴ Alistair Maclean transcript 78.21-79.17

⁹⁰⁵ TRI00000086_0126 para 385

11B – On Street target sum

Whilst the Mar Hall agreement had resulted in a fixed price for the off street works, the sum for on street work was merely a ‘target sum’⁹⁰⁶ and thus subject to further revision by the consortium. Predictably, this target increased, from £39m at Mar Hall to £53.4m by August 2011⁹⁰⁷. The amount ultimately agreed was £47.3m⁹⁰⁸, despite CEC originally having a lower target of £22.5m⁹⁰⁹ against TIE’s calculation of £19.2m⁹¹⁰. As noted in section 10B above, the CEC executive used the sum of £22.5m (and not the agreed figure of £39m) both in its calculation of the overall cost of the deal against its ‘trigger point’⁹¹¹ and in the cost reported to the Council in June⁹¹².

The independent report commissioned by CEC from Faithful & Gould in August 2011 concluded that Infraco’s price was “extremely high”, “not value for money” and “grossly inflated”⁹¹³. It recommended a reduction of £15m⁹¹⁴. Despite reference to Faithful & Gould in the report from the CEC Executive to Councillors⁹¹⁵, these conclusions were omitted. The Transport Convenor noted that these phrases would have “jumped out” to any Councillor and that there would have been “uproar”⁹¹⁶.

⁹⁰⁶ BFB00053262_0002 para 6.3

⁹⁰⁷ CEC01727000_0010 para 4.2.2.1

⁹⁰⁸ CEC02085642

⁹⁰⁹ CEC02085608

⁹¹⁰ CEC02084657

⁹¹¹ WED00000134_0250

⁹¹² Sue Bruce transcript 79.19-80.14

⁹¹³ CEC01727000_0005 para 2.6, 2.7

⁹¹⁴ CEC01727000_0016 para 4.2.4

⁹¹⁵ TRS00011725_0002

⁹¹⁶ TRI00000086_0153 para 475-477

Vic Emery agreed with Faithful & Gould's assessment but was not aware of CEC doing anything to address these concerns ⁹¹⁷. He was not confident that the £47.3m ultimately agreed represented best value ⁹¹⁸.

Both TIE and Faithful & Gould criticised Bilfinger's on street sum for a number of reasons:

- Bilfinger used an average of all subcontractor tenders rather than the lowest quote, and then added back the difference between this figure and their own estimate, thus inflating their price by £3m ⁹¹⁹;
- Bilfinger asked their subcontractors to price a worst case scenario, but Bilfinger's own proposal did not, meaning they could have been entitled to costs for changes, estimated at £6m ⁹²⁰;
- Bilfinger had uplifted their previous rates by 15% ⁹²¹;
- Bilfinger had priced logistics and traffic management at £4.5m, significantly higher than a *pro rata* calculation (based on Princes Street costs) of £800k ⁹²²;
- Bilfinger had added preliminaries amounting to 50% of the construction work ⁹²³.

⁹¹⁷ TRI00000035_0028 para 91

⁹¹⁸ TRI00000035_0034 para 122

⁹¹⁹ CEC01727000 para 4.2.2, TIE00691425_0001

⁹²⁰ CEC01727000 para 4.2.2, TIE00691425_0002

⁹²¹ CEC01727000 para 4.2.2

⁹²² TIE00691425_0002

⁹²³ TIE00691425_0003

Meanwhile, the increase from £39m appeared largely to be as a result of Siemens inflating their price by £14m, that being the amount by which they had required to discount their Phoenix price in reaching agreement at Mar Hall. The clear view was that Siemens were simply adding this reduction back into the target sum ⁹²⁴. TIE's commercial team had assessed the value of Siemens on street work at £4.5m ⁹²⁵, whilst Faithful & Gould noted that the original cost per kilometre would have resulted in costs of only £960k ⁹²⁶.

Sue Bruce apparently agreed that Siemens should not be allowed to recover their pre-mediation losses in this way ⁹²⁷ as it was "a contradiction with the overt agreement" ⁹²⁸. This is difficult to reconcile with CEC nevertheless agreeing the final on street price of £47.3m. Colin Smith, who was responsible for this agreement, said that he does not know how the original target sum of £39m was reached ⁹²⁹, making his claim to have worked to ensure best value in agreeing the final price of £47.3m ⁹³⁰ questionable.

Steven Bell noted that Smith was:

"very quiet and a little uncomfortable when this was discussed in general forum with Siemens and Bilfinger" ⁹³¹.

⁹²⁴ TIE00688781, TIE00688885, TIE0068878, TIE00688914

⁹²⁵ TRI00000249_0018 para 28. Siemens immediately reduced their price by £6m in response to initial TIE criticisms (TIE00691425_0003).

⁹²⁶ CEC01727000 para 4.2.3

⁹²⁷ TRI00000084_0048 para 154

⁹²⁸ TIE00688914

⁹²⁹ Colin Smith transcript 73.5-73.8

⁹³⁰ TRI00000143_0067 para 265

⁹³¹ TIE00691220_0001

CEC's Director of City Development considered that the cost of the settlement agreement ⁹³² signed in September 2011 was "excessively high" ⁹³³. Turner & Townsend, which replaced TIE following the settlement agreement, noted that the pricing for on street works was an "unfavourable arrangement" for CEC ⁹³⁴. The final actual cost rose to £51.6m ⁹³⁵.

⁹³² BFB00005464

⁹³³ TRI00000108_0114 para 150d

⁹³⁴ WED00000103_0017

⁹³⁵ WED00000101

11C – Turner & Townsend

Following the settlement agreement, Turner & Townsend were brought in by CEC to replace TIE in project management, at a cost of £7m⁹³⁶. It appears that Turner & Townsend raised a number of similar concerns to those which had been raised by TIE, including concerns over the terms of the settlement agreement, the Infraco programme and the pricing for on street works⁹³⁷.

There seems to have been friction between Turner & Townsend's management of the project and CEC's apparent policy of appeasement, for example:

- When Infraco complained about Turner & Townsend raising issues with the contract in December 2011, Sue Bruce remarked that “this did not sound like the current client instructions to Turner & Townsend”⁹³⁸.
- In February 2012 Infraco again complained that “the approach taken by Turner & Townsend... did not seem to be in the spirit of the settlement agreement”, again for raising a contractual challenge. Sue Bruce said she would “re-affirm” to Turner & Townsend that “it was important that the good relationship continued”⁹³⁹.
- In September 2012 Turner & Townsend advised CEC that Infraco had no contractual entitlement to a payment of £6.45m being sought for changes associated with a value engineering reduction in the programme⁹⁴⁰. By February

⁹³⁶ TRI00000108_0112 para 148b

⁹³⁷ WED00000103 and see Sections 5C and 11B above

⁹³⁸ CEC01890994_0005

⁹³⁹ CEC01942260_0004

⁹⁴⁰ CEC02017359 pg4, pg22

2013 Turner & Townsend advised that Infraco still had not provided sufficient information to demonstrate that costs had actually been incurred and were refusing to provide any further information, however CEC instructed Turner & Townsend to certify these amounts regardless ⁹⁴¹.

- In August 2011, the Council had voted to truncate the tram route at Haymarket⁹⁴². As a result of this, Transport Scotland withheld the remaining funding ⁹⁴³ of £72m, which was reinstated only when the Council effectively overturned this vote ⁹⁴⁴. Following this reversal, Infraco's programme was amended ⁹⁴⁵ from Rev 3A to Rev 4 and a payment was agreed in respect of this programme change ⁹⁴⁶. Later in April 2013 Turner & Townsend advised that Infraco had not provided sufficient information to demonstrate that costs were actually incurred in respect of this programme change ⁹⁴⁷. However CEC nevertheless approved payment of the full £4.5m in respect of this issue in January 2014 ⁹⁴⁸.

⁹⁴¹ CEC02085657_0026

⁹⁴² Described as a "very political" decision – Iain Whyte transcript 99.6

⁹⁴³ TRS00031263

⁹⁴⁴ Ainslie McLaughlin transcript 195.3-195.9

⁹⁴⁵ CEC02031937

⁹⁴⁶ Colin Smith transcript 164.17-166.5

⁹⁴⁷ CEC02027146_0025

⁹⁴⁸ CEC02072604_0008

(12) BONUSES

The issue of bonuses within TIE has been highlighted at various points in the Inquiry. **Richard Jeffrey** as CEO recommended to the remuneration committee that bonuses should not be paid to any staff within TIE ⁹⁴⁹. He himself never received any bonus ⁹⁵⁰.

Jeffrey during his time also instigated an investigation by Anderson Strathern into the payment of bonuses which may have been made around the time of financial close, which he intimated to McGougan and McLean at CEC ⁹⁵¹.

David Mackay, in his role as interim Executive Chairman of TIE prior to Jeffrey's arrival, had overseen a change to the way in which bonuses were paid at TIE, thus reducing the overall level of bonuses ⁹⁵². CEC's Director of Corporate Services considered that Mackay and Jeffrey were both sympathetic to CEC's concerns about bonuses and took appropriate action ⁹⁵³. Mackay himself never received any bonus ⁹⁵⁴.

Steven Bell and **Susan Clark** were both entitled to bonus payments. However they both deferred their bonus payment due for the financial year 2008/2009 (i.e. covering financial close) until completion of the project ⁹⁵⁵.

⁹⁴⁹ CEC00314582, TRI00000097_0036 para 206

⁹⁵⁰ TRI00000097_0061 para 366

⁹⁵¹ CEC00013342, TRI00000097_0007 para 23-25. The SETE group's representatives have been advised that Anderson Strathern's conclusions cannot be discussed as CEC Recovery Limited (formerly TIE) has claimed legal privilege over the advice received.

⁹⁵² Jim Inch transcript 159.24-160.2

⁹⁵³ Jim Inch transcript 160.19-160.23

⁹⁵⁴ TRI00000113_0104 para 376

⁹⁵⁵ CEC00114444

APPENDIX 1 – CHRONOLOGY OF DISPUTES

20 March 2009 -	PSSA
3 June 2009 -	MOV2
29 June 2009 -	Mediation 'marathon'
13 October 2009 -	Adjudication: Hilton Hotel
16 November 2009 -	Adjudication: Carrick Knowe/Gogarburn
4 January 2010 -	Adjudication: Russell Road
23 April 2010 -	MOV3
18 May 2010 -	Adjudication: Tower Bridge
24 May 2010 -	Adjudication: Track drainage
16 July 2010 -	Adjudication: Incomplete MUDFA works
29 July 2010 -	BSC Project Carlisle Offer
7 August 2010 -	Adjudication: Murrayfield Underpass
9 August 2010 -	First RTNs issued by TIE
24 August 2010 -	TIE Project Carlisle Counter Offer
11 September 2010 -	BSC Project Carlisle 2 nd Offer
22 September 2010 -	Adjudication: Depot Access Bridge
24 September 2010 -	TIE Project Carlisle 2 nd Counter Offer
29 September 2010 -	BSC cease all works other than Depot
26 November 2010 -	Adjudication: Landfill Tax
13 December 2010 -	Adjudication: Subcontracts
24 February 2011 -	BSC Project Phoenix Offer
2 March 2011 -	Adjudication: Preliminaries
8 March 2011 -	Mar Hall mediation
20 May 2011 -	MOV4
15 September 2011 -	MOV5

APPENDIX 2 - CHRONOLOGY OF EVOLUTION OF PRICING ASSUMPTION 1

27 November 07

Preferred bidder weekly progress meetingⁱ:

“GG and MC echoed WG earlier concerns and need to firm up on prices to take confidence level to the high ninety %... BBS were uncertain if the information was sufficiently complete enough to achieve firm prices”.

7 December 07

Email from Gilbert to McFadzenⁱⁱ, seeking clarification on a number of issues. **Bell** is copied into Gilbert’s email but not the response from McFadzen on 10 December 07:

“The whole concept of re-pricing on the basis of these measurement issues, is not working. We need to discuss this asap.”

Gilbert replies (copying Crosse but not Bell) proposing a meeting with McFadzen, Walker and Flynn to discuss the impasse.

11 December 07

Letter from Gallagher to Walkerⁱⁱⁱ :

“We ask you to consider fixing your price, save for a very few notable exceptions where for example the design itself is absent.”

Email from Gilbert to Crosse & **Bell**^{iv} attaching proposal for settling a deal^v, proposing up to £10m:

“for BBS to take pricing risk for the scope and risks that are included in the deal... Technical scope - BBS take design development risk”.

12 December 07

Walker’s letter of response to Gallagher^{vi}:

“In those locations where the design is absent, we are not able to fix our price... In areas where design is partial, we have made reasonable assumptions based upon our experience and the existing design information provided. Notwithstanding material design changes we have a high level of confidence in our pricing”.

A schedule is attached identifying provisional sums totalling £8m.

13 December 07

Gallagher reply to Walker “requiring” a fixed price^{vii}.

Gallagher and Crosse attend meeting at Wiesbaden. It is agreed that BBS would take the design development risk^{viii}. McFadzen noted from Walker’s report of the meeting that it appeared that BBS had “agreed to take on a bit more risk than I thought we should, and that was the basis for me assisting with the writing up of the agreement”, and that the exact terms of the verbal agreement were not clear^{ix}.

17 December 07

Crosse emails Walker^x with a draft written agreement^{xi}. At clause 3.3:

"BBS included in their price for the construction cost risk in the development and completion of detailed designs being prepared by SDS, save for: (a) Any future changes to elements of the design for civils works that are substantially different compared to those forming the current scheme being designed by SDS..."

Walker forwards email exchange between himself and McFadzen to Crosse^{xii}; McFadzen in particular is critical of elements of the draft agreement, without any reference to clause 3.3.

18 December 07

A marked up version of the draft agreement^{xiii} is sent by Gilbert to McGarrity, McEwan, Richards and Crosse^{xiv} appending to clause 3.3 the note:

"Design must be delivered by the SDS in line with our construction delivery programme previously submitted"

but does not otherwise alter the wording.

Email from Walker to Gilbert^{xv}:

"I have concerns that this amount was the amount envisaged when we thought SDS design would be complete at novation. Obviously this is not now the case and I believe the £"m will need to be increased in the Infraco contract."

19 December 07

Email from Walker to Gilbert^{xvi}:

"our firm price including the additional £8m to fix the 'variable' sums noted in our tender is based on all the additional information which we received from SDS via the 4 No. CDs. The last of which was delivered to us on 25th. November 2007. We therefore insist that our contract be related to this."

Gilbert's response is:

"Don't understand what this really means and will call now to discuss".

Agreement reached in subsequent discussion between McFadzen, Walker, Gilbert and Crosse.^{xvii}

Minutes of the TPB meeting at which **Bell** is present^{xviii} note that McGarrity explained that:

"the contract price was based on the Wiesbaden deal... a premium had been included in the contract price to firm up previous provisional sums."

The powerpoint presentation for the same meeting^{xix} set out McGarrity's presentation that:

"BB taking detailed design development risk".

Email from Gilbert to Walker^{xx} attaching further draft^{xxi} which adds to clause 3.3 the words:

"as typically represented by the drawings issued to BBS with the design info drop on 25/11/07".

20 December 07

Email response from Walker^{xxii}:

"We still have issues with accepting design risk. We have not priced this contract on a design and build basis always believing until very recently that design would be complete upon novation. With the exception of the items marked provisional which we have now fixed by the way of the 8 million we cannot accept more drain (sic) development other than minor tweaking around detail. Your current wording is too onerous. Trust we can find a solution."

Gilbert forwards this to Crosse and Bell with the note "!!!!!!!!!!".

Meeting later that morning between the parties, at which the final agreement was signed. Attendees on the TIE side were Crosse, Gilbert and Dawson^{xxiii}.

Gilbert emails McGarrity (copying in Bell)^{xxiv} attaching a copy of the signed Wiesbaden Agreement^{xxv} – clause 3.3 reads:

"The BBS price for civils works includes for any impact on construction cost arising from the normal development and completion of designs based on the design intent for the scheme as represented by the design information drawings issued to BBS up to and including the design information drop on 25th November 2007... For the avoidance of doubt normal development and completion of designs means the evolution of design through the stages of preliminary to construction stage and excludes changes of design principle, shape and form and outline specification".

Gilbert testified that the latter phrase was agreed with Walker to protect BBS from 'scope creep'.^{xxvi}

13 January 08

Email Dawson to Gilbert^{xxvii} with initial draft of Schedule 4^{xxviii}. This contains none of the Wiesbaden wording on design development.

15 January 08

Meeting between BBS/Pinsents and TIE/DLA^{xxix} – Bell not present. The minutes state:

"BBS stated that they qualified their bid such that they would not take any risk in respect of the SDS programme (Post Meeting Note – No such Qualification found). BBS want stronger control and incentivisation of the SDS performance. BBS want tie to take risk on SDS programme performance... GG explained that details of what the contract price represents will be defined in detail in Schedule 4. Any changes from this will be a tie change."

16 January 08

Dawson email to McFadzen and Flynn^{xxx} attaching draft above^{xxxi}.

1 February 08

Email from Walker to Gilbert, copying in Bell^{xxxii}:

"Bilfinger Berger's business model does not permit the liability for risks that do not belong in our Industry or risks which are unable to be assessed and quantified. The pricing assumptions have been based on the information given that tie would deliver the Design in accordance with their Procurement Strategy ie complete at Novation... Tie have not delivered the Issued for Construction Detailed Design in accordance with the Procurement Strategy and therefore the Risk Profile has changed for BBS, Tramco and SDS. It is this which is giving rise to the current difficulties and apparent shifting of position."

4 February 08

Email from McFadzen to Dawson & Gilbert^{xxxiii} attaching a draft Schedule 4, prepared by Laing which bears no relation to the earlier Dawson draft. This includes "base case assumptions" that the design will:

"not, in terms of design principle, shape, form and/or specification, be amended from the Base Date Design Information", defined as the design issued to Infracore by 25/11/07^{xxxiv}.

6 February 08

Comments by Dawson on the above assumption^{xxxv} suggest that the November BDDI date is "a bit early", suggest adding "materially" before amended and ask "what about any specific issues that we know about, such as VE?". Andy Steel further comments:

"Given that a substantial amount of design requires to be presented, reviewed etc this clearly will not happen."^{xxxvi}

Steel also noted in respect of the wording for the Notified Departure concept:

"Can't be just any departure or all risk will come back to TIE".

Bell was not included in either of these exchanges, though McEwan, McGarrity, Crosse and Fitchie were, with reference to a meeting taking place on this date to discuss.

7 February 08

Rutland Square Agreement^{xxxvii} signed by Crosse for TIE, fixing the price except in respect of changes to the ERs and "the resolution of the SDS residual risk issue", defined in clause 4 as:

"provision of adequate design information, and particularly earthworks design by SDS and the recovery by the BBS consortium of costs and expenses from SDS in the event that their designs are inadequate".

Bell not present. Paragraph 2.5 of the schedule to the agreement amends Schedule Part 4 but not in respect of the base case assumption on design.

11 February 08

Email from Dawson to Walker^{xxxviii} suggesting a meeting to discuss Schedule 4, with himself, Gilbert, Murray and DLA on the TIE side. Walker responds the following day saying:

“Schedule 4 was clearly dealt with, why is Bob trying to re engage. The matter is closed”. Gilbert’s reply copies in Bell for the first time and outlines elements of Schedule 4 which are not yet concluded, without reference to the base case assumption on design.

12 February 08

Email from Fitchie to Laing regarding their private conversation about “the need to get Schedule 4 on the table quickly”^{xxxix}.

14 February 08

Email from Dawson to Murray^{xl} attaching Gilbert’s notes of meetings on Schedule 4^{xli}, noting that there should be an exception to the assumption that the BDDI will not be amended to cover “design development... words as Wiesbaden Agreement”.

19 February 08

Email from McFadzen to TIE, including Bell^{xlii} attaching BB’s design due diligence report^{xliii}: Executive summary notes the design is:

“incomplete and will require substantial further development”, noting 40% of the detailed design has not been issued. As a consequence “novation is considered to present significant and unforeseeable risks to the project”.

Email from Dawson to McFadzen and Flynn^{xliv} with a further draft of his original version of Schedule 4^{xlv}. This now includes assumptions regarding design and that the price:

“includes for any impact thereon arising from the normal development and completion of designs based on the design intent”

as represented by 25/11/07 design drop; that the design will not:

“in terms of design principle, shape, and/or specification be materially amended from the drawings forming the infraco proposals”

and defining normal design development in line with the Wiesbaden Agreement.

22 February 08

Email from Laing to Gilbert, Fitchie & Dawson^{xlvi} with a marked up version of the TIE draft of Schedule 4^{xlvii}, suggesting rewording from what is included in the price to a series of statements as to the assumptions upon which the price is based:

“This approach will require an alteration to the way in which many of the pricing assumptions are expressed but has no impact on the commercial intention”.

Fitchie forwards this to **Bell** and others on 25 Feb 08, without any substantive commentary^{xlviii}.

26 February 08

Email from McFadzen to Crosse^{xlix} with the revised Infraco civil proposals^l, which Crosse forwards to Bell.

"It is BBS's intention that the design will, where possible, be subject to change where (1) it is not in accordance with BBS pricing assumptions, Part 1 of Schedule 4... and/or (2) it is not in accordance with BBS Programme Assumptions."

Throughout the proposals it is noted: *"Design to be completed and all consents and approvals obtained"*.

27 February 08

Meeting between TIE and BB regarding the civils proposals^{li}. Bell not present. TIE opening comment "Proposal fails to meet expectations. Not precise, opens up opportunity to propose changes in the future". Under Section heading 'Structures', TIE ask "Does price include acceptance of emerging current design?" BB reply: "Price based on design at 25th Nov". TIE ask "Is priced based on Design information up to 25th Nov 2007 except where assumptions are qualified by previous 27 [drawings] plus cross sections previously discussed", no response recorded.

3 March 08

Email from Gilbert to **Bell & McEwan**^{lii}:

"there seems to be confusion on the relationship between IPs and Sch 4 – we need to be careful that we don't compromise the position for post contract by linking them too strongly".

Paper attached^{liii}: on Sch 4 pricing:

"Identification if item must be agreed at contract award or if it can be addressed by change control post award – nothing can go to post award... Material impact (if any) on risk transfer – no difference with preferred bidder position".

Email from Dawson to Gilbert & Laing^{liv} attaching a revised draft Schedule 4^{lv} for discussion at meeting following day. Bell not copied. Gilbert then sends agenda to meeting^{lvi} to various recipients including **Bell**. The agenda includes "definition of 'normal design development'"

7 March 08

Citypoint Agreement between Walker, Flynn, **Bell & McEwan**: price increase of £8.6m for various terms including "Acceptance by BBS of any SDS design quality risk and consequent time impact"^{lvii}.

9 March 08

Email from Fitchie to senior TIE team including **Bell**^{lviii} enclosing the Close Report^{lix} and Risk Matrix. Close Report states:

"In broad terms, the principal pillars of the contract suite in terms of programme, cost, scope and risk transfer have not changed materially since the approval of the Final Business Case... and that where risk allocation has altered this has been adequately reflected in suitable commercial compromises."

10 March 08

Email from Dawson to BBS and lawyers (Bell note copied)^{lx} with agreed wording of clause 3.4:

“The Construction Works Price has been fixed on the basis of inter alia the Base Case Assumptions noted herein. If now or at any time the facts or circumstances differ in any way from the Base Case Assumptions (or any part of them) such Notified Departure will be deemed to be a Mandatory tie Change in respect of which tie will be deemed to have issued a tie Change on the date that such Notified Departure is notified by either Party to the other.”

11 March 08

Email from Bissett to senior TIE team including Bell^{lxi} with updated Close Report^{lxii} which states:

“The only material change in the Risk Allocation Matrices between Preferred Bidder stage and the position at Financial Close in respect of the construction programme costs associated with any delay by SDS in delivery of remaining design submissions into the consents and approvals process beyond Financial Close”.

12 March 08

Email from Dawson to BBS and lawyers^{lxiii} attaching updated version of Schedule 4^{lxiv}. Bell not copied.

13 March 08

Email from Moir of Pinsents to Dawson, Gilbert & Fitchie^{lxv} attaching markup of TIE’s draft from 3 March^{lxvi}. Pinsents have not in this draft altered the phrase “materially amended” in PA1 despite having deleted the word “materially” in draft of 22 February 08.

19 March 08

Email from Laing to Dawson and others^{lxvii} attaching BBS mark-up of Schedule 4^{lxviii} – Clause 3.4 has been altered from a provision that the price includes for impact arising from normal design development to a prohibition on the design changing other than developments arising from normal design development. ***The net effect of the rewording and reordering of the clause makes the definition of normal design development redundant on a literal reading: see figure 7 overleaf.***

Email from Fitchie to Bell and others. His commentary on said draft raises no issues with PA1^{lxix}.

20 March 08

Email from Hecht of DLA to various parties including Bell^{lxx} attaching a clean version of the draft Schedule 4 as updated^{lxxi}, without any advice on the import of the changes.

26 March 08

Email from Laing to Bell and others highlighting that there may be an immediate Notified Departure based on the change in design programme from v26 to v28, which contravenes PA4^{lxxii}.

31 March 08

Laing sends followup email seeking confirmation that TIE understand and agree that the change in design programme will lead to an immediate Notified Departure from PA4^{lxxiii}.

01 April 08

Email from Laing to various parties including **Bell** ^{lxxiv} attaching the final draft of Schedule 4^{lxxv} in which PA1 is not updated from the previous draft of 19 March 08. However, clause 3.2 is amended by Laing in line with his intimation of the immediate Notified Departure from PA4.

22 April 08

Email from Murray to McGarrity, Fitchie & **Bell** ^{lxxvi} attaching Schedule 4 for Quality Assurance Review. The Quality Control spreadsheet for financial close^{lxxvii} notes that the finalisation of Schedule 4 is for Gilbert, Dawson and Murray, with the main QA review by McGarrity and the secondary review by **Bell**, together with review by DLA.

FIGURE 7: 19 March 2008 redraft

3.4 Pricing Assumptions ~~in respect pricing of the Construction Works Price~~ are:

a) Design

⇒1 The design prepared by the SDS Provider will not (other Infraco Construction Works Price includes for any impact thereon than amendments arising from the normal development and completion of designs): based on the design intent for the scheme as represented by Base Date Design Information.

• ~~For the avoidance of doubt normal development and completion of designs means the evolution of design through the stages of preliminary to construction stage and excludes changes of design principle, shape and form and outline specification.~~

• ~~Subject to the above, the Design Prepared by the SDS Provider will not:~~

⇒1.1 ~~in terms of design principle, shape, form and/or specification be amended from the drawings forming the Base Date Design Information (except in respect of Value Engineering identified in Appendices C or D),~~

⇒1.2 ~~be amended from the drawings forming the Base Case Design Information Infraco Proposals as a consequence of any Third Party Agreement (except in connection with changes in respect of Provisional Sums identified in Appendix B) and~~

⇒1.3 ~~be amended from the drawings forming the Base Case Design Information Infraco Proposals as a consequence of the requirements of any Approval Body.~~

For the avoidance of doubt normal development and completion of designs means the evolution of design through the stages of preliminary to construction stage and excludes changes of design principle, shape and form and outline specification.

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- i CEC01328042_0002 para 4
 - ii CEC01494152_0002
 - iii CEC01481843
 - iv TIE00087524
 - v TIE00087525
 - vi CEC00547788_0003
 - vii CEC00547779
 - viii Matthew Crosse transcript 143.21-144.2, William Gallagher transcript 76.3-76.8,
cf Richard Walker transcript 57.8- 57.20
 - ix Scott McFadzen transcript 74.21-75.5
 - x CEC01494927
 - xi CEC01494928_0003 c3.3
 - xii CEC01494961
 - xiii CEC01430735_0003
 - xiv CEC01430733
 - xv CEC00547735
 - xvi CEC00547732
 - xvii Scott McFadzen transcript 79.7-80.4
 - xviii CEC01363703_0005
 - xix CEC01483731_0005
 - xx CEC00547738
 - xxi CEC00547739_0003 c3.3
 - xxii CEC00547740
 - xxiii CEC00547737, Scott McFadzen transcript 83.25-84.2
 - xxiv CEC01431385
 - xxv CEC01431387_0003 c3.3
 - xxvi Geoff Gilbert transcript 111.17-111.20
 - xxvii CEC01495585
 - xxviii CEC01447446
 - xxix CEC01529968
 - xxx CEC01447268
 - xxxi CEC01447269
 - xxxii CEC01489538
 - xxxiii CEC01448377
 - xxxiv CEC01448378_0002
 - xxxv CEC00592615
 - xxxvi CEC01448356_0002
 - xxxvii CEC00205642_0003 c4
 - xxxviii CEC00592619_0002
 - xxxix CEC01540594
 - xl CEC01448861
 - xli CEC01448862
 - xliv CEC01449440
 - xliv CEC01449100_0003
 - xliv CEC00592621
 - xliv CEC00592622_0005
 - xlvi CEC01449876
 - xlvi CEC01449877_0005
 - xlvi CEC01449710
 - xlvi CEC01491360
 - l CEC01450027

li TIE00078797
lii CEC01450122
liii CEC01450123_0004
liv CEC01450182
lv CEC01450183
lvi CEC01450185
lvii CEC01463888
lviii CEC01463884
lix CEC01463886_0004
lx CEC01450544
lxi CEC01428730
lxii CEC01428731_0028
lxiii CEC00592628
lxiv CEC00592629
lxv CEC01545414
lxvi CEC01545415
lxvii CEC01451012
lxviii CEC01451013_0007 c3.4
lix CEC01489543
lxx CEC01451053
lxxi CEC01451054
lxxii CEC01465933_0003
lxxiii CEC01465933_0002
lxxiv CEC01423746
lxxv CEC01423747
lxxvi CEC01374219
lxxvii CEC01399321